

## The Structural Approach of Jacob Grimm and His Contemporaries\*

Winfred P. Lehmann

*University of Texas*

### 1. Introduction.

For various reasons the theoretical position of earlier linguists, or even their achievements, may not be properly evaluated. Instead, one may rely on works that treat only a portion of previous linguistic study, such as Pedersen's impressive survey of historical publication (1924/1931). Publication is so great that it is difficult to be current, let alone conversant with the works of predecessors. And those works may be in languages that are no longer controlled, even by linguists. Or the terminology and presentation of an earlier time may be misunderstood. In this way, 19th century linguistics has been characterized as dealing with language piecemeal rather than as a structure made up of interrelated sub-structures and elements. I here demonstrate that from the beginning of the 19th century linguists have applied a structural approach, and that many of them viewed language as the so-called mainstream linguists do today.

The structural approach itself varies in definition. Bussmann summarizes the general view concisely (1983:509-11, with copious bibliography). As its major premise by her definition, structuralism regards language as a relational system of formal (not substantial) elements that can be comprehended precisely and presented in a strictly formal way. Accordingly all statements are to be formalized in accordance with structural procedures. In contrast, the earlier linguists, among them the neogrammarians, are held up as proponents of atomism. By implication they and earlier linguists regarded language as consisting of unrelated sounds and of palpable forms presented in a narrative manner.

The contrast, and the advantage, of the supposedly new

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\*For E. F. Konrad Koerner on the occasion of his sixtieth birthday.

structural view has been illustrated especially by the improved understanding achieved by Saussure and later linguists of the Indo-European vowel system in its historical development. As our honoree has pointed out (1985), Saussure in his *Mémoire* presented a set of formulae by which that development was clarified, among other advances distinguishing long vowels that had resulted from a combination of short vowel and laryngeal from those that were lengthened by ablaut. Grimm by contrast had thrown up his hands when considering the vowel system of Proto-Indo-European and the early dialects, only proposing that it might be clarified by examining ablaut. It was clarified indeed by the set of formulae we owe to Saussure in which two vanished elements, A and Q, were listed with the resonants *y, w, r, l, m, n*. When the ablaut changes had taken place, all eight in their sequences, as with preceding *e*, were parallel. The differences that were opaque to Grimm and later Indo-Europeanists as well, were obscured by the loss of A and Q, with compensatory lengthening of the preceding vowel in normal grade, among other changes.

Saussure's clarification of the Indo-European vowel system can only be applauded. It was welcomed by Hirt, who then elaborated on it extensively (1900, 1922). But we may ask whether this achievement was due to a new conception of language, or whether it resulted from a brilliant application of the same view of language that was held by the founders of 19th century historical linguistics, Jacob Grimm and his contemporaries. We may also ask why descriptive linguistics of the 19th century has been disregarded in discussions of the emerging modern linguistic sciences.

## **2. Early 19th century linguistics in the context of other scientific activities.**

When young linguists like Franz Bopp, and generalists like Jacob Grimm, turned their attention to the study of language at the beginning of the nineteenth century, a brilliant biologist set the stage for advances in historical biology. Following Linnaeus and others who had established classification of living beings by comparing selected characteristics to determine relationships, Georges Cuvier in 1812 applied the technique to fossils (cf. Lehmann 1993:24). Franz Bopp was in Paris at the time, beginning his four years of study there where Sanskrit texts were available. Whether or not through direct contact, Bopp

applied the same technique to selected characteristics of language. In 1816 he published the first results of his attention to the Indo-European languages, a work with the title: *Über das Conjugationssystem der Sanskritsprache*. In smaller print the title continues: *in Vergleichung mit jenem der griechischen, lateinischen, persischen and germanischen Sprache*.

Bopp's title makes it clear that he is treating the inflection of the verb as a system, a structure. Further, in his terminology language is an organism by which the relationship between a situation (*Gegenstand*) and a characteristic (*Eigenschaft*) is expressed; the verb is the part of speech that expresses such relationships (*Verhältnisse*) to one another, as between subjects and objects. While expressing relationships, the verb itself has no meaning. And there is only one verb, 'be, *esse*' (1816:3). Moreover, in some sentences the verb may not be present, as when the predicate is an adjective; or the relationship may be expressed by 'inner recasting (*Umbiegung*) and shaping (*Gestaltung*) of the syllable of stems' (1816:7). However it is expressed, for Bopp relationship is the fundamental force in language. His terminology may differ from that of Saussure, but he clearly treats language as expressing relationships of formal elements. He proceeds in his monograph on the conjugational system to comprehend these precisely and to present them formally.

It is also noteworthy that for Bopp language is a system of signs. That point is made clear by his teacher and publisher, Windischmann, in the preface to the monograph. According to him Bopp "had resolved to treat the investigation of language as a historic and philosophic study.... [As motive for such investigation, he holds that] through intimate acquaintance with the meaningful features (*Signaturen*), by which the word, this child of the spirit, expresses the deepest emotions and feelings, as it does the clearest and most definite thoughts, indescribably many of the hindrances to true self-knowledge and self-culture are dispelled" (1816:ix-x). Windischmann's terminology may differ from that used today, as in referring to philosophical rather than psychological or cognitive study of language; yet the characterization of some subsequent linguists as philosophers maintains this term. Moreover, his discussion of signs and of words as children of the spirit hardly indicates that his student regards language as other than a system of formal elements.

### 3. The procedure in the grammatical works of Bopp and Grimm.

Bopp presents Sanskrit conjugation in paradigms much like those in our grammars, except that he cites the third singular first, then the second and finally the first; he cites the Greek and Latin forms, however, in the order of our grammars (cf. Lehmann 1967:38-45). In his first section on the formation of the present indicative, he gives as illustration the forms of *ad* 'eat', as follows (1816:15; st. stands for *statt* 'instead of'; the form given for the first singular contains a typographical error, with *-a-* rather than *-m-*).

|                   | <i>Ad, Essen</i> |                  |
|-------------------|------------------|------------------|
| <i>Sing.</i>      | <i>Dual.</i>     | <i>Plur.</i>     |
| 3. Atti st. adti, | Attah st. Adtah, | Adanti.          |
| 2. Atsi - adsi,   | Attah - adthah,  | Attha st. adtha, |
| 1. Adai,          | Advah,           | Admah.           |

While with this minor exception Bopp's structural treatment is in accordance with that of grammars of the classical languages, it stands in clear contrast with that of Indian grammarians. Their presentation is readily accessible, thanks to the excellent edition and translation of Panini's grammar by Sumitra Katre (1987). As virtually any textbook informs us, in their presentation the Sanskrit language is carried out through a sequence of rules. These deal in a highly compact manner with individual items, categories and formal elements like affixes, that enable the user to construct the various derivational and inflectional forms. The rules are so interrelated that it is difficult to illustrate the procedure without lengthy discussion. Citation of a relatively clear and simple rule may illustrate the difference from the structural presentation applied from the beginning of the 19th century; the rule deals with distribution of Middle endings (Katre 1987:55, whose interpretation of the rule is quoted after it).

1.3.12 anudatta-ṅ-ITa ātmanepadām  
 Ātmanepadā (=taṅ and āna 1.4100) l-substitute endings  
 (3.4.78) are introduced after verbal stems marked by an  
 ānūdatta vowel or ṅ as IT.

As may be assumed from this illustration, unlike Bopp's

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presentation there are no paradigms. Morphological structures may be built or recognized from applicable rules, but are not explicitly depicted. By contrast, from the beginning of nineteenth century linguistics Bopp recognizes and presents morphology structurally.

But as noted above, question arises with regard to phonology, as of the vowels. When on the other hand one examines Grimm's treatment of the consonants, their presentation as a system is obvious. Moreover, he distinguishes them through relationships. The liquids *r, l, m, n* are examined as a separate set from the spirants and other consonants. These are related much more abstractly than in current presentations. The voiceless stops are classed together as *tenues*; the voiced stops as well as the voiced spirants are classed together as *mediae*; similarly, the voiceless spirants and affricates are classed together as *aspiratae*. The relationships are expressed through rules. It is only later that the term 'law' was introduced, a term that is unfortunately maintained almost to ludicrous degree by some historical linguists.

Grimm's presentation of the relationships between the Greek, Gothic and Old High German obstruents other than *s* may be illustrated by citing one of his tables; others may be examined in Lehmann 1967:48-60.

|    |      |      |    |      |     |    |      |     |
|----|------|------|----|------|-----|----|------|-----|
| Gk | Goth | OHG  | Gk | Goth | OHG | Gk | Goth | OHG |
| P  | F    | B(V) | T  | TH   | D   | K  | —    | G   |
| B  | P    | F    | D  | T    | Z   | G  | K    | CH  |
| F  | B    | P    | TH | D    | T   | CH | G    | K   |

The rules that state the relationships of the members in this table differ only in phonetic accuracy from those of current handbooks, not in depicting the relationships nor the phonological structures of the languages of the illustrations. While Grimm uses the terms *Buchstabe* 'letter,' *Laut* 'sound' and *Zeichen* 'sign,' the actual sounds represented by the symbols in the individual languages were not yet of primary concern. Phonetics was developed in the decades after the publication of his grammar. In the pioneering days of historical linguistics many phonological relationships, as of the vowels, remained obscure because they were so 'varying and manifold,' in Grimm's words. These relationships were gradually clarified in the course of the century through dedicated study

accompanied by increased understanding of the production of speech. The clarification was assisted by maintenance of a structural approach.

#### 4. The procedure in descriptive works of Grimm's time.

Curiously, little if any attention is given to the descriptive approach to language in Grimm's day. Linguistic science of the 19th century is assumed to deal with language historically, as in Pedersen's impressive history of the period. But concern with language in the schools of the time is based on a descriptive approach that might well be called cognitive. It also is highly structural, with views that are again in the forefront of much linguistic work. Glinz reviewed the various proponents of this descriptive / cognitive approach and their work to introduce an improved approach for teaching language in the schools of the 19th century (1947).

The chief theoretician of the approach was Karl F. Becker, who laid down its principles in several works, the most important of which was published in 1827 and expanded in a second edition of 1844. According to it language is a structure in which all elements are related. Becker's term for that entity is *Organismus*, a term that will be discussed in the next section. His views were strongly influenced by Humboldt, who has also been cited prominently by a current theoretician. To illustrate the influence of Humboldt that led to this position Glinz cites his statement that in language 'everything in it exists through the other, and all of it only through the force (*Kraft*) pervading the whole' (Becker 1841:12; Glinz 1947:42). Glinz goes on to equate that statement with the current view that language is a system in which every entity functions only through its opposition to another entity; that is, Humboldt's view, adopted by Becker, is comparable to the often cited position that language is a system in which everything is interrelated: *La langue est une système où tout se tient*.

In elaborating this view Becker assumes that all human beings have the same mental equipment; accordingly, the conditions of thought and of concepts are necessarily given. The forms of language are then to a certain extent necessary forms, so that through examining the thoughts one achieves a correct understanding of the forms of language. Moreover, because all languages in their deepest bases are the same and subject to the same principles, the basic grammar must also be

the same. That is to say, we must assume a universal language with which all human beings are equipped. Because infants have this equipment, they acquire language quickly. And since the conditions of thoughts and concepts as well as their relationships in language are identical, and not the actual surface forms, they are the basis of the grammatical system which applies to all languages. On this assumption Becker's grammatical principles were applied not only to German but also to other languages of Europe as well as to Classical Latin and Greek.

In the first sentence of his theoretical work Becker distinguishes between language (*Sprache*) as a property of human beings through which their thoughts are revealed and speech (*Sprechen*) as a product in which their view of the world is formulated and expressed (1841:1). The distinction is echoed in the more common *langue* and *parole*. Language as equivalent to meaning is structured logically while speech is based on phonetic procedures. The structure of both is based on binary oppositions of which the primary is between action (*Tätigkeit*, the cognitive side) and being (*Sein*, the material side). In accordance with these the primary opposition between action and being appears in the cognitive side in the distinction between predicates and subjects, verbs and nouns, names of things and names of persons, and so on. In the phonetic side the opposition is manifested above all in the contrast between vowels and consonants, thereupon between sub-groups of these.

Becker assumes that in language sentences are framed in a logical form and this then is expanded; the term became prominent once again in Chomsky's paper: "The Logical Basis of Linguistic Theory" (1962). In Becker's theory the sentence is based on a thought (*Gedanke*); this is extended by concepts (*Begriffe*) to produce the grammatical form that then is performed (1844:166-67). The fundamental thought consists of a subject that expresses being and a predicate that expresses activity, as in the sentence: *The students are reading*. The predicate then may be expanded by an additional concept that expresses an objective relationship, as in *The students are reading their textbooks*. The sentence may be further extended through an attributive relationship added to the subject, as in *the students of the class*. These three relationships are fundamental in syntax. Through them sentences may be expanded, as in complex and compound forms. They also point to the fundamental syntactic

components, which are subjects, predicates, attributes and objects. Becker's syntactic statements to be sure are not formalized; he produced his theoretical works before the day of computers and the consequent widespread use of rules to represent syntactic processes.

The 603 pages of Becker's theoretical work are tightly argued so that only his fundamental position is presented here to illustrate his structural approach. The work was highly influential. To use a current expression, it was revolutionary in the teaching of language in the schools of the time. While Becker himself produced a grammar of German in accordance with his principles (1836-37), his publications are characterized as very difficult, so that the revolution was carried out through work of his followers. These and their successes, such as Jakob Wurst's *Sprachdenklehre* of 1836 that in six years enjoyed 19 editions in 150,000 copies, may be determined from Glinz's monograph. It may be added that Glinz himself aimed to replace Becker's approach, which was still applied in the schools of his day. He set out to do as much in subsequent publications, some of which are listed in the bibliography here. While the great and long influence of Becker is not without importance in the history of attention to language and linguistics, the chief concern here is his mentalist and structuralist conception of language, not least in contrast with the assumption that such a view of language was innovative and introduced only recently.

##### **5. The concept of *Organismus* in the early 19th century.**

Crediting linguists in the early 19th century with the position that language is a structure may be considered an anachronism, in view of their word 'organism.' Yet when one examines the technical language of the time and even later, the difficulty in determining an appropriate term for language may be clear. The term *Structur* is defined in the large German dictionary founded by the Grimm brothers as being applied to non-material forms only recently and then taken over as a concept in psychology (20:90-92); accordingly it may not have been available to Grimm and his contemporaries. *Organismus* is defined more briefly as referring to an entity capable of life and its mechanism, with a reference to Becker's grammar (13:1339-40).

Its English counterpart, *structure*, has as first definition in

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the *Century Dictionary* VII.6001: "The act of building or constructing..." which is labeled obsolete or rare; as second, "That which is built or constructed; an edifice..."; as third, "An organic form; the combination of parts in any natural production; an organization of parts or elements"; as fourth, "Mode of building, construction, or organization; arrangement of parts, elements, or constituents; form..." As these definitions illustrate, the word structure is defined in a major dictionary produced at the end of the 19th century as referring to physical or biological forms, not abstract forms like language.

*Organism* in turn is defined first in the *Century Dictionary* V:4150 as: "Organic structure; organization," which is labeled rare; as second: "A body exhibiting organization and organic life"; as third, "Anything that is organized or organic," with a quotation from Macauley: "The social organism is not a mere physiological *organism*." This third definition corresponds to the use of the term by Bopp, Becker and their contemporaries. It may be noted on the other hand that dictionaries today in their first definition include terms like 'living.' Because of the more specific reference to living beings in current use of the word *organism*, the basis of the selection of the term by Bopp and Becker in the statements cited above may be misinterpreted today.

When Bopp, Grimm and others were seeking a label to characterize language as an entity, the term *Organismus* must have seemed appropriate. As noted above, linguistics of the time was strongly influenced by the advances in biology. Becker begins his grammar with a definition of life as organic and its *Einrichtung* (mechanism) as the *Organism des Dinges* 'organism of the thing.' In his second paragraph he defines language as an organic mechanism of the human being (1836:1). Continuing his characterization he states that language arises necessarily from the nature of the human being as a thinking being: the human being speaks because he thinks. And because language is an organic product of human nature it must be comprehended and explained from this point of view (1836:2-3). It is only in the middle of the 19th century that the term 'structure' and its adjective 'structural' came to be applied to language. We may interpret the shift in use of the term to the greater application of abstract views in the study of language in the course of the 19th century.

## 6. A brief overview of the course of linguistics in the past two centuries.

In Becker's view attention to language in his day concentrated on the morphology, especially forms and their inflection. He ascribed that view to the prevailing rationalism of the 18th century. Influenced by Humboldt, he in turn introduced a mentalist view, and in keeping with the influence of biology he called language a product of organic life. Just as seeing is a function of the eye, so speech unfolds with thinking in an organic manner. That is, language is a product of the mind, and it functions in accordance with specific principles. Chief among these is binary opposition. This applies throughout language, the lexical as well as the grammatical components (1841:9-12). As noted above, the sentence is framed by this principle as the initial output in the performance of speaking, and the principle is applied in its extension. Becker produced a grammar of German in accordance with the principle. He then published 'an extensive grammar of German as a commentary on school grammars, instead of a second edition of his German grammar' (1836-37). The large work contains a lengthy treatment of syntax and presentation of the phonology as well as derivational and inflectional morphology. Both works were highly influential in descriptive linguistics of the 19th century and especially in language instruction in the schools. In the course of the century numerous publications on linguistic theory and syntax presented different views; in reviewing theirs and Becker's Glinz objected to his overwhelming binarism and his analysis of the sentence as built on subject, predicate and so on as sketched above in section 4. Yet he also points out that Becker's ideas were maintained in language instruction in the schools for 120 years (1947:53-70)

While Becker was highly influential, linguistics as a whole came to be compartmentalized. Historical studies went its own way. Its spectacular discoveries in determining the interrelationships among the Indo-European languages and proposing the original language as well as the culture of its speakers occupied the spotlight in university research and publication. The problems were immense. As in any science, the simplest were first solved, such as those in morphology and phonological changes like the Germanic consonant shift. Enough of these existed, so that at the time, as Becker

complained, syntax was neglected. Moreover, attention was often given to minute problems, such as clarification of phonological developments in a few forms or the etymology of individual words. The field then came to be characterized as applying atomistic procedures. And because the field concentrated on forms, the predominant theoretical position came to be positivism and later behaviorism. Its procedures for solving phonological and morphological problems were helpful also in the study of native languages, where the phonological problems needed to be treated first, and then attention was given largely to morphological problems. On the other hand, control of language by the brain was pursued by some linguists and psychologists, such as Steinthal and Wundt, as well as syntacticians like Weisgerber, but these were less acclaimed than the historical studies as any sketch of linguistics attests. The field also came to be separated from cultural study, as the foundation of the Linguistic Society of America in 1924 and similar learned associations elsewhere attests. Its procedures acquired the designation structuralism, and earlier attention to language, such as Becker's remained unread.

Besides arriving at an accurate position regarding earlier linguistic study, such as that of Becker, one may gain perspective by attention to his views. Recently again major attention has been given to a mentalist approach to language as expounded by Chomsky. While his primary aim differs from Becker's in his attempt to understand how the mind controls language, rather than how language is produced, the difficulties that he has encountered may find some solutions by comparing Becker's mentalistic approach, its successes and failures. Examination of the current efforts carried out now over nearly half a century are pessimistic, such as Gardner's review of three works by leading scholars in the field, which points out their contradictory positions and concludes with the statement: "Perhaps an entirely different perspective will be required" (1995).

Similarly, the attempt to understand language through its control by the mind requires an understanding of the mind. In a review of the recent book *How the Mind Works* by one of Chomsky's followers Jones sums up his reaction with the statement: "when it comes to understanding how the mind works [poetic] imagination will be needed for some time yet" (1997:16). More recently, a detailed study of "rule learning by

seven-month-old infants” finds that “while infants may have the ability to extract ... rules from small amount of data and to generalize those rules to novel instances, ... these tools are unlikely to be sufficient for learning language, but both may be necessary prerequisites” (Marcus *et al.*, 1999). Happy employment of fanciful explanations on how children acquire language and how it is controlled might then be employed with caution until we have further information on the working of the mind. Moreover, examining Becker’s structuralist and mentalistic position, as well as those of Bopp and Grimm, may have more than antiquarian value. And the differences of Bopp, Grimm and many earlier linguists from later structuralists may consist in their knowledge of language and their use of theory to portray and account for it, while many linguists today start from theory and deal with their data in accordance with their theoretical position.

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