

Structuralism and Rationalism in Linguistics

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I . Introduction

An academic discipline, the study of linguistics can probably be traced back to 400 B.C. when the Indian scholar Panini worked out the first systematic description of Sanskrit. Its recent recognition, however, stems largely from the spirited intellectual battle now going on between two opposing schools : structural linguistics, led by Yale's Leonard Bloomfield in the 1930s and today defended most vigorously by Charles Hockett of Cornell, and the newer transformational linguistics, which was conceived and developed by Noam Chomsky of the Massachusetts Institute of Technology.

The argument between the schools is extremely complex: in essence it revolves around the fundamental question of how man learns and uses language. The long-dominant structuralists claim that language is a habit man acquires by imitating other men, and thus should be studied by analyzing sounds and how they are manipulated to create sentences.

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Generally, structural linguistics tend to reject the idea that there is any "right" or "correct" grammar; its permissive principles influenced the word selection of Webster's Third New International Dictionary. By contrast, the school of transformationalists contends that language is an innate, instinctively acquired facility; the study of it should start with sentences, then try to discern the rules by which a sentence conveys its meaning.

Chomsky concedes that an individual must hear someone speak before he can speak meaningfully himself, but says that listening only triggers an intrinsic competence man already has. If this were not so, asks Chomsky, why is it that man can construct an infinite variety of sentences that he has never heard before, and always in grammatical patterns that are predictable? The transformational linguists thus theorize that a spoken sentence must be analyzed on two different levels—s "surface" level consisting of what one actually hears and an inner "deep" level, predictable but as yet unexplainable, that provides the basic meaning.

The purpose of this study is to match the theoretical backgrounds of structuralism and transformational-generative grammar with their application to the language education. First, I have attempted to discuss the theoretical backgrounds of structuralism in connection with Bloomfield. Secondly, I have attempted to deal with the background of the transformational theory in connection with Chomsky.

Thirdly, I have attempted to give a brief comparison of the two theoretical backgrounds.

II. European Structuralism and Bloomfield

A new linguistic study was sought by modern linguistics who came up with a modified traditional grammar through the 1900s.

The Swiss scholar F. de Saussure (born in 1857) was the center of European structuralism linguistic circle.

In 1916 Ch. Bally and A. Sechehaye published under the title *cours de linguistique generale*, an elaboration of the notes held between 1906 and 1911.

This text was to have tremendous importance in the development of contemporary linguistics.

The *cours* did not bear the imprimatur of the author; it was a posthumous compilation based on students' notes.

As a result, the book's influence is derived from single passages- often detached from the rest of the work-which appeared to the reader to contain specially stimulating insights.

For several decades after the publication of the *Cours* it seemed as if Saussure's conceptions were best summarized by a series of dichotomies, such as synchrony versus diachrony, 'language' versus 'speech' or 'speaking' (*langue* versus *parole*), paradigmatic versus syntagmatic, 'significans' or 'signifier' versus 'significatum' or 'signified' (*signifiant* versus *signifié*) and by notions such as the arbitrary character of the linguistic sign. These were often starting-points for theoretical excursions which moved far away from Saussure's thought.

Saussure's influence was instrumental in a number of later developments of linguistic theory.

The Prague school and Copenhagen school were influenced by Saussure.

The Linguistic Circle of Prague was established in October 1926 on the initiative of V. Mathesius, and among the linguists who took part in its activities were B.Havranek, J. Mukarovsky, B.Trnka, J.Vachek, M.Weinger; among the foreigners who published in the Circle's *Travaux* were the Dutch A.W.de Groot, the German philosopher and psychologist K.Buhler, the Yugoslav A.Belic, the Englishman D.Jones and the French scholars L. Tesnière, E.Benveniste, A.Martinet.

Particularly significant was the participation of three Russian linguists in the Circle's activities; S.Karcevakij, R.Jakobson, N.S.Trubeckoj.

In Scandinavian linguistic thought with J.N.Madvig, A.Noreen, H.G.Wiwel, O. Jespersen (and, long before, with the great Rasmus Rask), there is a rich tradition of scholars who contributed to general linguistics.

Within this tradition we find the main representatives of what is often called the Copenhagen School.

This also owes much to F.de Saussure, and has developed with great rigour some aspects of his *Cours*.

Linguistic theory, with Brondal and Hjelmky, becomes more formal and abstract than with their predecessors; both have strong philosophical, and particularly logical interests.

At the beginning of the twentieth century linguistics in the United States did not differ to any great extent from European linguistics.

It is after 1920 that American linguistics really develops particular trends that differentiate it from European linguistics.

We find the vigorous spread of structural linguistics, in the two aspects represented by

Spair and Bloomfield.

Bloomfield was the center of the American structural linguistic circle.

Bloomfield's contribution to linguistics can be described as follows :

- 1) The object to be described is not the written language but the spoken one, and the relation of the linguist to the language must be that of a nonmanipulation observer.
- 2) The set of structures that the linguist discovers in the language he is studying must be characterized in an absolutely explicit manner, without any overt or covert appeal to the general cognitive or linguistic of the individuals using the description.

The first means that the explicit statement of the structure of the language must describe that language as it is actually used by native speakers, not as the linguist or some formal body like a language academy has dictated that it should be used. Grammar is not supposed to be prescriptive or normative. They are supposed to reflect the real structure of the language for the natural people who speak it. Bloomfield expressed is : An unfortunate outgrowth of the general grammar idea was the belief that the grammarian or lexicographer, fortified by his powers of reasoning, can ascertain the logical basis of language and prescribe how people ought to speak. In the eighteenth century, the spread of education led many dialect-speakers to learn the upper-class forms of speech. This gave the authoritarians their chance : they wrote normative grammars, in which they often ignored actual usage in favor of speculative notions."

Bloomfield accepts the regularity of sound changes for his main concern of linguistic study, which is understandable when we consider his linguistic orientation in the historic-comparative linguistics. He follows the position of Jung-Grammatiker, and he rejects any teleological explanation for residual forms.

He believes that only the explanation of regularity guarantees the scientific nature of linguistics. His early study of Algonquian languages resulted from his attempt to prove that linguistics is a science.

Secondly, he tried to get rid of any psychological element in the linguistic study. He claims in the preface of his "A Set of Postulates for Science of Language" as follows.

Also, the postulational method saves discussion, because it limits our statements to a defined terminology : in particular, it cuts us off from psychological dispute.

Thirdly, he introduces physicalism in his of language. He goes so far as to deal with the problem of style in language through physicalism.

1) John T. Grinder, Suzette Haden Elgin : Guide to Transformational Grammar (U.S.A. : Holt, Rinehart and Winston, Inc., 1973), p.31.

Fourthly, he maintains that meaning has nothing to do with linguistic investigation, but he does not reject entirely the problem of meaning in the analysis of language as his followers do with their rigorous criticism of the traditional grammar.

According to Bloomfield, language students should pay no attention to meaning or neglect, or we should undertake to study language without meaning, simply as meaningless sound. However, he suspects the possible intervention of extralinguistic elements in the study of meaning.

In order to give a scientifically accurate definition of meaning for every form of a language, we should have to have a scientifically accurate knowledge of everything in the speakers' world. The actual extent of human knowledge is very small, compared to this. We can define the meaning of a speech-form accurately when this meaning has to do with some matter of which we possess scientific knowledge.

We can define the names of minerals, for example, in terms of chemistry and mineralogy, as when we say the ordinary meaning of the English word salt is 'sodium chloride (NaCl)', and we can define the names of plants or animals by means of the technical terms of botany or zoology, but we have no precise way of defining words like love or hate, which concern situations that have not been accurately classified—and these latter are in the great majority."

What must be borne in mind is that the acceptance of meaning as the object of linguistic study is different from the introduction of mentalism. He opposes the study of meaning for the criterion of analysis, definition and classification practised by the traditional grammarians. The question is not whether meaning should be rejected or not, but how it can be dealt with. However the American structuralists brought about many successful reforms in linguistic investigation through the post-war American language education policies, although they paid little attention to the problem of meaning. They came up with the following slogans for their methodology :

- 1) Language is speech, not writing.
- 2) A language is a set of habits.
- 3) Teach the language, not about the language.
- 4) A language is what its native speakers say, not what someone thinks they ought to say.
- 5) Languages are different."

2) Leonard Bloomfield, *Language* (London : George Allen & Unwin Ltd., 1962), p.139.

3) Karl Conrad Diller, *Generative Grammar, Structural Linguistics, and Language Teaching* (U.S.A. : Harvard University Press, 1971), p.9.

Moulton regards these slogans as good formulations of the linguistic principle, on which the structural linguists based their language teaching.

On the surface it may seem that some of the slogans are gratuitous—teach the language, not about the language. In what sense is this a controversial statement from a theoretical point of view? The controversy comes in the definition of terms particularly in what is meant by "language."

Here, as defined by slogan number two, "a language is a set of habits." If we these slogans with the meaning that was originally intended, embodying the whole structuralist or descriptivist view of language, then no one in the rationalist tradition can agree with them.

The American structuralism made a great progress by employing the technique and procedure of linguistic analysis postulated in Bloomfield's language. Afterwards, the post Bloomfieldians took a slight different position from his. Firstly, they insisted on the accurate analysis and description of linguistic corpus. Secondly, they made a division of (phone) emic and (phon) etic materials for contrast by means of distribution. Thirdly, morphemes must be classified on the basis of phonemics in the same way. Fourthly, syntax must be dealt with by the combination of morphemes. Fifthly, the order of analysis must be from phonetic analysis to syntactic analysis. Sixthly, each level must be precisely divided. The lowest part of sound must be the starting point from which phoneme and morpheme and syntax must be analyzed. In other words, sounds are grouped into a phoneme and phonemes are grouped into a morpheme, and morphemes are grouped into a sentence. This kind of rigorous linguistic analysis helped to make a remarkable achievement in field work.

III. Plato, Descartes and Chomsky

Chomsky claims that grammar must be a description of the competence underlying the actual performance in the linguistic production and perception.

A generative grammar describes a matching of phonetic and semantic representations, and thus it makes up "a hypothesis as to how the speaker-hearer interprets utterances, abstracted away from many factors that interweave with tacit competence to determine actual performance.

Transformational-generative grammar is based on rationalism. Therefore, the

transformationalists take the following rationalistic attitude towards language :

- 1) Langue is unique to humans (=only humans acquire a language) Embedding structure is impossible to animal communication.
- 2) Languae is the/a core case of Plato's problem (Plato's problem : How come so much knowledge with so little experience?)
- 3) Language is a core case of Descartes' problem (Descartes' problem : language is used in such a normal creative fashion)
- 4) Language is common to all humans
- 5) Crucial human faculties like thinking, imagination, mathematical conceptions, ect. are deeply related to and derived from language faculty. (without language faculty, a human cannot be a human since human experience is impossible)
- 6) Among human faculties, language faculty is most susceptible to modern scientific investigation.
- 7) The theory of language faculty is a model for theories of other human faculty (ex. theory of vision, theory of music) in terms of concept of "hierarchy" or "triggering"

In addition, speech may be affected by physical surroundings, emotions, memory limitations, distractions, or other features such as chewing gum in the mouth of the speaker. It is language (the underlying system), not actual speech output, that is of primary interest to the transformationalist.

Another way of stating this is to say that he is interested in the speaker's competence, or knowledge of the language, rather than in his performance, or actual use of it. We will see the difference between human linguistic competence and that of lower animals.

Chomsky sets forth Plato's insights about language, and his conclusion is that

Much of the interest of the study of language, in my opinion, lies in the fact that it offers an approach to Plato's problem in a domain that is relatively well circumscribed and open to inspection and inquiry, and at the same time deeply integrated in human life and thought. If we can discover something about the principles that enter into the construction of this particular cognitive system, the principles of the language faculty, we can progress toward a solution for at least one special and quite important case of Plato's problem."

Chomsky considered the possibility of a machine which would give a specific number of responses to a specific number of cues, but pointed out that one could not conceive of a machine that could reply appropriately to everything said to it, as every human being can. However imperfect a man is, he can arrange words together to express his thoughts :

4) Noam Chomsky, Knowledge of language (New York : Praeger Publisher, 1986), p. XXVI.

however perfect an animal, it cannot. The distinction is basic and not just connected with peripheral organs, for a parrot can utter words, but cannot speak; a deaf mute cannot produce words, but can use language. Consider the parrot for a moment. We can easily teach him to produce a number of sets of sounds that seem like utterances. By using reinforcement more carefully and appropriately we can train him to produce each of these 'utterances' on appropriate suggestion. There should be no difficulty in training the bird to utter sounds that seem like "please feed me" in order to receive food, or like "It's a pellet of food" when the food appears from the hopper. By the definitions of behavioral psychology these utterances could be classified as a man and a tact respectively, essential elements of what Skinner calls verbal behavior. But I do not think that many of us would be prepared to call such behavior language. What is missing is the creative element: the parrot's repertoire of utterances remains limited and closed: we do not find it one day saying "Please give me a pellet" unless it has been exposed to that particular sentence.

And the central fact in support of the creative aspect is that humans produce (and of course understand) many sentences that they have never heard before. For the parrot to learn English by memorizing all the sentences of English would be a clearly impossible task, for there are about 10 possible English sentences of twenty words or fewer. This creativity is the basic distinction between what I have called language-like behavior and knowing a language. While precise specification may not be possible, for there is a continuum, the interpretation of each is relatively clear. Thus, languagelike behavior refers to the parrot trained to speak, and equally well to the student who is able to recite a number of sentences in a second language but not to modify them and use them in a free conversational situation. This example of the students learning a second language makes the continuum clear, for there is a stage at which the student may be able to use his stock of sentences to answer a finite set of questions.

But this is not the same as knowing a language, which involves the ability to produce an indefinite number of sentences in response to an indefinite number of stimuli. OE is said to know a second language when one's competence is like that of a native speaker. Performance need not however be identical, for it is accepted that someone knows a language even when he speaks hesitantly, with many errors, or with a foreign accent, or when he understands it with some difficulty under conditions of noise. What confuses the distinction between language like behavior and knowing a second language is a third category, speaking a second language with the grammar of the first. It is thus normal for a person who knows one language and has developed language like behavior in a second

to be able to adjust this behavior in accordance with the grammar of his first language. It is this that differentiates the human language learner from the parrot.

Again, it is a matter of degree, but we would not normally want to say that such a person has learned a language until he has developed linguistic competence in it, and until he is able to understand and create novel sentences in it according to its grammar and not just to the grammar of his first language.

The creative aspect of language is one of the good cornerstones of the argument for transformational grammar, for only such a grammar has available to the "technical devices for expressing a system of recursive process," and only with such devices can the creative aspect be formulated explicitly. The only way to handle the fact that language has an infinite set of sentences and that is used by people with a finite time for learning is to postulate a system of rules and principles. The task of the grammarian is to find the best statement of the form of these rules and principles.

Knowing a language is a matter of having mastered these (as yet incompletely specified) rules and principles; the ability to handle new sentences is evidence of knowing rules and principle that are needed to generate them.

A descriptively adequate grammar will not only state rules to describe the linguistic data, but it will contain the general principles that enable the native speaker to produce and interpret sentences in his language and decide on the tacit linguistic knowledge of the native speaker, his internal grammar⁵⁾

The grammar of a language, then, is a description of competence; it may be compared, to use an analogy first suggested by Saussure, to the score of a musical work. The score necessarily underlies any performance, but does not account for all the features of any single performance. A moment's thought makes clear that linguistic performance may be either active or passive, that both the speaker and the hearer are in fact performing. The implication of this for language learning is extremely important, for it suggests that one may learn a language just as well by listening as by speaking. The implication for language testing is equally important, for it suggests that we can find out about 'knowledge of a language,' which is the same as underlying linguistic competence, equally well when we test passive and active skills.

5) Liliane Haegeman, *Government and Binding theory* (Cambridge : Basil Blackwell, Inc., 1991), p.7.

This last does not of course mean that an individual's performance as a speaker is the same performance as a listener; such a claim would clearly be ridiculous, for it would be nothing more than saying that anyone who could read a Shakespearean play could also write it. All that it does claim is that the same linguistic competence, the same knowledge of rules underlies both kinds of performance.

Knowing rules is also the principal factor in the understanding of messages with reduced redundancy. Miller and Isard (1963) have shown that the intelligibility of a sentence depends on it following syntactic and semantic rules. Sentences which break semantic constraints prove more difficult to understand and repeat than those that do not, and ungrammatical sentences (e.g., "diamond shocking the prevented dragon witness") prove even more difficult. This effect became even clearer when they studied the resistance of sentences to making by added noise; grammatical sentences proved to be far more resistant than ungrammatical ones. Thus, they showed that the "knowledge of the language" providing the listener with help in handling sentences with reduced redundancy was a knowledge of rules, of the grammar of the language.

If we accept that knowledge of a language, linguistic competence, is a matter of knowledge of rules, what implications does this have for language testing? First, we must keep clear the various reasons for which language tests are designed; we are concerned here with proficiency tests, or what Lewis has called "summative assessment" and not with diagnostic tests. Further, we are concerned with a test that is independent of a specific set of materials and of the language analysis that lies behind it. In searching for a test of overall proficiency, we must try to find some way to get beyond the limitation of testing a sample of surface features, and seek rather to tap underlying linguistic competence.

This can only be done with any degree of certainty if we can be sure that we are presenting the subject with novel utterances, or calling on him to produce utterances that he has not heard before. The simplest way to do this is to set up an interview situation calling for normal language functioning; this method however is both difficult to score reliably and prohibitively expensive to administer. A long term solution to this problem is to use such interviewing techniques as a method of validating other measures. Until this is done, another worthwhile approach appears to be to make use of the principle of redundancy, and test a subject's ability to function with a second language when noise is added or when portions of a text are masked.

Virtually every person in the world knows a language. Perhaps the most striking phe-

nomenon of language is its universality. Few other cultural phenomena are that universal. Equally noteworthy, perhaps, is the fact that lower animals can not learn human language. A certain amount of communication is possible between man and animal, but it is not because the animals understand language.

Try speaking to your dog in English, — it will probably work as well as Korean. It is not to understand the language. The similarities among all languages as being qualitatively different from the so-called "animal language", and they seem to be dependent on the biological make-up of man. Chomsky expresses the comparison of human and animal linguistic competences in the fact that the brutes are devoid of reason, is that, although among those of the same species, some are more perfect than others, as among men, which is particularly noticeable in horses and dogs, some of which have more capacity than others to retain what is taught them, and although all of them make us clearly understand their natural movements of anger, of fear, of hunger and other of like kind, either by the voice or by other bodily motions, it has never yet been observed that any animal has arrived at such a degree of perfection as to make use of a true language; that is to say, as to be able to indicate to us by the voice, or by other signs, anything which could be referred to thought alone, rather than to a movement of mere nature; for the word is the sole sign and the only certain mark of the presence of thought hidden and wrapped up in the body; now all men, the most stupid and the most foolish, those even who are deprived of the organs of speech, make use of signs, whereas the brutes never do anything of the kind, which may be taken for the true distinction between man and brute.

Human speech is "appropriateness of behaviour to situation"; animal behaviour is control of behaviour by stimuli. The latter is characteristic of automata; it is the former that is held to be beyond the bounds of mechanical explanation, in its full human variety. Chomsky finds the difference between human language and animal communication systems from Rationalistic insights.

According to the rationalist, "verbal behavior" is free of external stimuli or internal physiological states, so it is evidently not developed in the individual by conditioning. That is, it is "mental reality" and "cognitive power". Transformationalists derive their theoretical backbones from the 17th century rationalism. We can easily see that human verbal behavior is not made entirely through repetition, mimicry, and analogy. Therefore, man shows creativity in his verbal behavior as he generates or understands sentences which he has never learned or heard. According to Descartes, the cognitive power is a

faculty which is not purely passive and which "is properly called mind when it either forms new ideas in the fancy or attends to those already formed, "acting in a way that is not completely under the control of sense or imagination or memory.

Thus, the rationalists claim that human verbal behaviour is not made by habit formation of stimulus-reponse repetition, which does nothing more than awake the internal linguistic competence. Accordingly, there can be found a definite boundary between human language and animal communication.

Animals achieve their communicative competence by condition reflex caused by the external stimulus, but men achieve their linguistic competence through the internal language acquisition device. Therefore, animals have their mechanical automata limited by the number of transfer circuits switched by the unlimited external stimuli, but men have their internal linguistic device unlimitedly operated by the limited external stimuli. This means that language is not an aggregate of separated or unrelated sounds, words, and sentences but organic system of linguistic rules :

According to Humbolt, a language is not to be regarded as a mass of isolated phenomena— words, sounds, individual speech productions, etc. — but rather as an "organism" in which all parts are interconnected and the role of each element is determined by its relation to the generative processes that constitute the underlying form.

In modern linguistics, with its almost exclusive restriction of attention to inventories of elements and fixed "patterns" the scope of "organic form" is far more narrow than in the Humboldtian conception.

But within this more narrow frame, the notion of "organic intuition" was developed and applied to linguistic materials in a way that goes far beyond anything suggested in Humboldt. For modern structuralism, the dominant assumption is that "unsysteme phonologique (in particular) n'est pas la somme mecanique de phonemes isoles, mais un tout organique dont les phonemes sont les membres et dont la structure est soumise a des lois." These further developments are familiar, and I will say nothing more about them here.⁶⁾

Thus, Humboldt's linguistic philosophy can be said to have led to the theory of Chomsky's transformational-generative grammar. According to the descendancy of Descartes-Humbolt-Chomsky, it was clearly understood that one of the qualities that all languages have in common is their "creative aspect". As an operational question, there must be a grammatical property dealing with creative aspects which operates as a

6) Noam Chomsky, *Cartesian Linguistics* (New York : Harper & Row, Publisher, 1966), p.26.

grammatical device to create an indefinite number of sentences with a system of rules. According to Chomsky, "An essential property of language is that it provides the means for expressing indefinitely many thoughts and for reacting appropriately in an indefinite range of new situations." According to the definition, the length of a sentence is limited from the practical point of view, not from the theoretical point of view. Theoretically, the length of a sentence is unlimited which presupposes that there can be made an infinite number of sentences. So far, the essence of language has been explained in terms of its deep structures. This argument advances into the concepts of competence and performance.

We thus make a fundamental distinction between *competence* (the speaker-hearer's knowledge of his language) and *performance* (the actual use of language in concrete situations). Only under the idealization set forth in the preceding paragraph is performance a direct reflection of competence. In actual fact, it obviously could not directly reflect competence. A record of natural speech will show numerous false starts, deviations from rules, changes of plan in mid-course, and so on. The problem for the linguist, as well as for the child learning the language, is to determine from the data of performance the underlying system of rules that has been mastered by the speaker-hearer and that he puts to use in actual performance. Hence, in the technical sense, linguistic theory is mentalistic, since it is concerned with discovering a mental reality underlying actual behavior. Observed use of language or hypothesized dispositions to respond, habits, and so on, may provide evidence as to the nature of this mental reality, but surely cannot constitute the actual subject matter of linguistics, if this is to be a serious discipline. The distinction noted here is related to the *langue-parole* distinction of Saussure; but it is necessary to reject his concept of *langue* as merely a systematic inventory of items and to return rather to the Humboldtian conception of underlying competence as a system of generative processes. Accordingly, grammar must be an object of description of language competence. In other words, a grammar of a language purports to be a description of the ideal speaker-hearer's intrinsic competence.

If the grammar is, furthermore, perfectly explicit— in other words, if it does not rely on the intelligence of the understanding reader but rather provides an explicit analysis of his contribution— we may (somewhat redundantly) call it a *generative grammar*. What must be borne in mind here is that transformational-generative grammar does not accept the dualism of Bloomfield's mechanism and mentalism although mentalism is an object of its investigation.

Transformational-generative grammar deals with language by the method of dualism: deep structure and surface structure. To accept traditional mentalism, in this way, is not to accept Bloomfield's dichotomy of "mentalism" versus "mechanism." Mentalistic linguistics is simply theoretical linguistics that uses performance as data (along with other data, for example, the data provided by introspection) for the determination of competence, the latter being taken as the primary object of its investigation. The mentalist, in this traditional sense, need make no assumptions about the possible physiological basis for the mental reality that he studies. In particular, he need not deny that there is such a basis.

One would guess, rather, that it is the mentalistic studies that will ultimately be of greatest value for the investigation of neurophysiological mechanisms, since they alone are concerned with determining abstractly the properties that such mechanisms must exhibit and the functions they must perform. Here we can see that there is something in common between Saussure's *langue* and *parole* and Chomsky's competence and performance. However, as we have noticed, there is a big difference between them: *langue* as merely a systematic inventory of items, and linguistic competence of transformational grammar is a systematic inventory of underlying generative process.

This kind of investigation based on rationalism offers almost unlimited possibilities for linguistic study and it has a historical nature of Descartes-Humboldt-Chomsky.

IV. Conclusion

Structural and descriptive linguistics, behavioral psychology, and other contemporary approaches tended to view a language as a collection of actions, or utterances, or linguistic forms (words, sentences) paired with meanings, or as a system of linguistic forms or events. In Saussurean structuralism, a language (*langue*) was taken to be a system of sounds and an associated system of concepts; the notion of sentence was left in a kind of limbo, perhaps to be accommodated within the study of language use. For Bloomfield, as noted earlier, a language is "the totality of utterances that can be made in a speech community." The American variety of structural-descriptive linguistics that was heavily influenced by Bloomfield's ideas furthermore concentrated primarily on sound and word structure, apart from various proposals, notably those of Zellig Harris, as to how larger units (phrases) could be constructed by analytic principles modelled on those introduced for phonology and morphology."

7) Noam chomsky, Knowledge of language (New York : Praeger Publisher, 1986), p.19.

As for structuralism, I have mainly discussed the Bloomfieldian methodology of analyzing language and its possible application to the language learning: namely, Bloomfield upholds linguistics as a pure science by dealing with only the observable linguistic phenomena. Naturally, he discovers the regularity of sound changes and takes it as his main concern of linguistic study. And his followers come up with quite a useful way of sentence analysis by analyzing a sentence with the step-by-step immediate constituents.

The study of generative grammar represented a significant shift of focus in the approach to problems of language. Put in the simplest terms, to be elaborated below, the shift of focus was from behavior or the products of behavior to states of the mind/brain that enter into behavior. If one chooses to focus attention on this latter topic, the central concern becomes knowledge of language: its nature, origins, and use.

The three basic questions that arise, then, are these:

- (i) What constitutes knowledge of language?
- (ii) How is knowledge of language acquired?
- (iii) How is knowledge of language put to use?

The answer to the first question is given by a particular generative grammar, a theory concerned with the state of the mind/brain of the person who knows a particular language. The answer to the second is given by a specification of UG along with an account of the ways in which its principles interact with experience to yield a particular language; UG is a theory of the "initial state" of the language faculty, prior to any linguistic experience. The answer to the third question would be a theory of how the knowledge of language attained enters into the expression of thought and the understanding of presented specimens of language, and derivatively, into communication and other special uses of language.⁸⁾

As for transformational-generative grammar, I have largely confined my concern to the concepts of language creativity distinguished from animal mechanical communication, and the dichotomy of linguistic phenomena into competence vs. performance and deep structure vs. surface structure. In the comparison of the above two linguistic schools, I have attempted to contrast the structuralistic inductive analysis — namely the observable phenomena of a particular linguistic corpus — with the transformational mentalistic reality of a sentential generation.

My conclusion of the comparison is that the innate linguistic creativity postulated by the transformationalists are superior to the conditional linguistic behavior advanced by the structuralists in the language education. What I regard as the strong points of the

8) Ibid., p.3.

transformational approach to the language learning over the structuralistic stimulus-response mechanism is that the transformationalists accept the linguistic universality as the most striking phenomenon of language and that language is peculiar to the human species, which presupposes that animalistic conditioning has nothing to do with the human creative verbal behavior.

This study constitutes nothing more than a suggestive attempt to prove that language is a human species specific such that the human verbal behavior cannot be studied without taking into account the human cognitive nature connected with the innate language acquisition device. My hope is that further and more serious study of this suggestion will bring about a truly new contribution to linguistic and language-learning theories.

〈국문초록〉

「언어학에 있어서 구조주의와 이성주의」

양 우 진

Saussure 사후에 제자들이 강의노트를 정리하여 「일반언어학강의」(1916년)의 출판을 기점으로 하여 유럽구조주의 시발이 되었고 현대언어학 연구의 기초가 되었다.

그는 언어는 체계를 이루는 구조체로서 개개의 사실을 단독으로 취급하지 않고 전체적인 개념으로 보았다.

즉 상호이해의 목적을 달성하는 사회적 의사소통 매개체로서 음과 음과의 상호관계, 의사소통 과정에 있어서 언어의 중요성을 강조했다.

유럽의 구조언어학은 Saussure의 영향을 받았는데 주로 Prague 학파와 Copenhagen 학파로 나누어진다.

Prague 학파는 1926년 10월 Prague 대학의 교수였던 Mathesius 교수등이 중심이 되어 학회를 창립하였고 Copenhagen 학파는 1934년 Brondal, Hjelmsley 등에 의하여 창립되었다.

구조주의는 Saussure로 시작되어 미국 언어학에 영향을 미치었는데 분포주의적 분석방법으로 유명한 이들 최초의 미국구조주의학파는 Bloomfield에 의하여 창설되었다.

Bloomfield는 언어라는 것을 동질적인 것으로 간주되는 "언어 공동체에서 행하여질 수 있는 발화의 총체인 것이다"라고 언어를 규정하고 mechanism에 입각한 실증주의적 연구방법에 의하여 행동주의, 경험주의 심리학에 입각한 학문연구를 하여 현대 언어학에 상당히 영향을 주었다.

Chomsky는 변형문법의 이론적 기초를 이성주의에 두고 있다.

경험주의가 언어습득을 후천적 경험을 강조하고, 이성주의는 선천적 언어능력을 중시한다.

고대부터 철학자들은 인간의 지식에 대해서 많은 의문을 제기 했는데 Platon은 "우리 인간은 어떻게 해서 그렇게 작은 경험을 하고도 그렇게 많은 것을 알게 될까?"라고 의문을 제기했다. 이는 인간지식은 경험에 의하기 보다 선천적 능력을 강조하여 Descartes에 의하여 이성주의 사상을 정립하는데 영향을 주었다.

Descartes는 인간의 언어사용에 있어 "우리는 어떻게 해서 말을 그렇게도 자발적으로, 창의적으로 사용할 수 있는 것일까?"라고 하였다.

Chomsky는 언어능력과 언어수행 양면성을 주장했다.

Saussure의 랑고는 언어능력, 파롤은 언어수행에 해당한다고 할 수 있다.

17세기 이성주의 철학자 Descartes에서 부터 시작되어 20세기 언어철학자 Humboldt로 이어지는 언어능력을 중시하는 이성주의 언어관을 주 연구 대상으로 하는 이론이 변형문법이다.