

## HAS LINGUISTICS BEEN AN AUTONOMOUS SCIENCE ?

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### ABSTRACT.

*The present status of linguistics as a science has been a result of the influence of the intellectual atmosphere as well as other sciences of different historical periods. All these have contributed to the establishment of linguistics as being empirical, objective and exact. However, linguistics became a branch of philosophy especially during the Greek period. Then, it has been aligned, under the influence of the prevailing intellectual atmosphere, with other sciences in subsequent periods until the present time. This situation seems to continue because of the unique nature of language, the subject matter of linguistics, which may be approached from different perspectives. Eventually, the autonomy of linguistics has been affected.*

### I- INTRODUCTION.

It is a common belief that linguistics, which is defined as the scientific study/ or the science of language, like other sciences, has passed through a number of different stages before its modern form and precise principals have finally been founded. Throughout those stages linguistics has been under the influence of other sciences of the age as well as the intellectual trends which were current and dominant during the different historical stages (Koerner, 1976). It is even claimed that the periodization of the historical development of linguistics as a science "seems to correspond rather closely to the periodization of the history of science in general" (Greene, 1974: 493).

Two important and related notions have been of serious concern to scholars of language with regard to the study of language; one is the notion of science and the other, but probably with less concern at least for some scholars, is the notion of the autonomy of this science. On such relationship, Bugarski (1976 :5) notes that "while autonomy was the order of the day, it was deemed necessary... to stress the scientific features of linguistics".

The present study aims at examining the development of these notions historically and finding out how they have applied to linguistics. It will simply attempt to answer the following two questions; that is: Has linguistics been an autonomous science ? And if so, when and how has it gained such status ? Although the study will follow a historical line of investigation, it is not intended to be an account of the history of linguistics in the sense of



listing all the contributions made by various scholars and nations on different linguistic issues and the developments that have occurred throughout the ages. Rather, it intends to focus on and examine some certain and significant contributions made by prominent figures in this field during different periods in order to test the hypothesis which states that linguistics has been on autonomous science. The discussion will focus mainly on certain variables such as the subject matter of study, the method of study, and finally the implications of the results. It is hoped that such procedure will make it feasible to determine how valid the hypothesis of the study is.

Recently, some scholars have outlined the characteristics of the concept of science and how it applies to linguistics. In this attempt to define science, Robins (1971 : 7) proposes three canons in general; namely exhaustiveness, economy, and consistency. He goes on to characterise linguistics as being scientific because "it deals with a specific body of material, namely spoken and written language, and that it proceeds by operations that can be publicly communicated and described, and justified by reference to stable principles and to a theory capable of formulation". Dineen (1967) argues that linguistics is scientific because it meets three important characteristics of the scientific method, namely; that linguistics is empirical, objective and exact. On the other hand, some scholars seem to be reluctant to consider linguistics as a science altogether. For example, Gray (1980: 22) insists that "linguistics cannot be a science because the facts of language truly are mentalistic not physical facts but ideal ones, accessible only and limited thereby, to human understanding". This latter position does not hold because, as it will be shown, those mentalistic facts have been adequately described through different scientific models. At any rate, the former meaning of science represents on form of science; that is inductive science.

With regard to autonomy, it may be said that this notion has been occasionally treated in literature. But it seems that there have been two senses of this notion. Linguistics is judged as being nonautonomous if the study of language is done according to nonlinguistic criteria such as logic or philosophy as it is the case with traditional grammar which was "intimately connected with philosophy and literary criticism" (Lyons, 1991: 17). Another criterion is the characterization of linguistics as being a branch of or incorporated into another science. We think that it is not wise after this to continue talking about an autonomous science in this case. Can we, for instance, say that psychology or physics is a branch of another science and at the same time their autonomy is maintained ?



## **II- LINGUISTICS AS A BRANCH OF PHILOSOPHY.**

In the past, philosophy characterized different aspects of the Greek culture. The contributions of the Greek philosophers to the study of language were considerable. In fact, it is no exaggeration to state that they laid the foundations of traditional grammar. Most of the traditional concepts such as the parts of speech, the grammatical categories, and sentence were first proposed by those scholars. The influence of the Greek logic has reached even nontraditionalist scholars. For example, Sapir proposes a definition of a sentence which derives from logic. He says that a sentence is "a linguistic expression of a proposition". (1921: 35).

But what motivated the study of language during that period? Was it done because of real interest in language itself as an object of investigation or because of some other reasons? It is evident from the linguistic descriptions made by the Greek philosophers that those descriptions were motivated by philosophical and logical reasons. Language was viewed primarily as "the vehicle of logical statement and syllogistic reasoning" (Robins, 1976: 16) and it was described as such. In other words, it was the philosophers' deep concern and interest about some philosophical issues related to man and the universe that led them to focus on language as a means to understand those issues. As Lyons (1968: 1) put it "For the Greeks, 'grammar' was from the first a part of philosophy. That is to say, it was a part of their general inquiry into the nature of the world around them and of their own social institutions". It was, however, the Stoics who laid great philosophical emphasis on language. In this regard, Robins (1967: 22) asserts that the Stoics "were interested in linguistic questions not principally as grammatical and textual critics; they were philosophers for whom language served as the expression of thought and feeling".

It is clear that the study of language during this period was very much under the influence of philosophy and logic. That is, the description was done within the context of such disciplines and it was aligned with them, from the very beginning. In a word, linguistics became "a separate branch of philosophy" (Robins, 1988: 462). After all, how can we say that linguistics was autonomous and scientific?

## **II- LINGUISTICS AS A BRANCH OF NATURAL SCIENCE.**

During the late eighteenth and the early nineteenth century, the intellectual atmosphere witnessed radical changes, known as "revolutions" in almost all fields of sciences. There were revolutions in chemistry, industry,



anthropology, astronomy, politics and others (Greene, 1974). How was the study of language affected by these changes ?

Three major developments were recorded during this period as far as linguistics is concerned. Firstly, Sir William Jones (1786) discovered the genetic relationships between Sanskrit on one hand and other Indo-European languages such as Latin and Greek on the other hand. In fact, this discovery is considered one of the major breakthroughs in the history of linguistics (Hockett, 1965). Secondly, the discovery of the systematic correspondences between the Germanic languages and other Indo-European languages which were known later as Grimm's law. Finally, the introduction of the neogrammarian hypothesis concerning the sound change.

It is noteworthy that the above linguistic achievements were the result of the influence of two natural sciences; namely physics and biology. From physics, the scholars of language borrowed the notion of "law" and from biology they borrowed the notions of "genetic" relationships, "growth" "life", "decay", and "death". The main idea underlying these notions is the idea of "evolution", that is change in the organism. There is no question that Darwin's revolution in biology exerted a big influence on the study of language (Koerner, 1976). In fact, it is believed that August Schleicher (1863) built a biological model of language. He considered language as a natural organism and he studied it as such especially with regard to its development which is believed to be done according to inexorable laws of change. Reflecting this view, Bopp wrote that "languages must be regarded as organic, formed in accordance with definite laws". Quoted in Sampson (1980: 17).

The notion of "law" constituted the cornerstone of linguistics during this period and linguistics as a science was identified with these laws. Therefore, we read about Grimm's "laws" and the neogrammarian hypothesis which states that sounds change according to "laws" that admit no exceptions. Praising the achievements made by historical and comparative linguistics, Sapir (1929: 207) notes that "their formations have a neatness and a regularity which recall the formulae, or the so-called laws, of natural sciences". So, the aim of linguistics during this period was to look for laws and regularities in language in order to account, in the first place, for sound changes which became a central subject for linguistics. It is also important to point out that those laws were entirely historical. Viewed from this angle and based on the type of the given laws, linguistics may be identified as a historical science which was concerned with linguistic changes only. Paul (1920) made it clear when he insisted that what is not historical in linguistics is not scientific. Schleicher, too, reiterated a similar view when he said that if we do not know how a linguistic form has come about we do not know it.



In sum, language was studied as an organic body which was governed by laws. It was no different from other organisms which fall within the domain of biology. Within this context, one cannot but lean toward considering the whole science of language as a biological or a natural science by the virtue of its subject matter in this case. This tendency did indeed lay significant restrictions on the type of linguistic results and the autonomy of linguistics. It is true that the study of language entered a new stage by discovering the laws of sound change but this type of diachronic description limited the scope of linguistics during this period. The influence of historical evolution treated in other sciences was great on linguistic and the autonomy of linguistics. In essence, the linguistic model was a biological model. therefore, there was not much to expect as far as the study of language is concerned because of this narrow view to the nature of language. The most important thing that this period contributed to linguistics as a science was the recognition of the existence of laws in the system of language.

#### **IV- LINGUISTICS AS OF BRANCH OF SOCIAL PSYCHOLOGY.**

The last decade of the nineteenth was characterized by the emergence of social sciences. The intellectual atmosphere was a social one. In the 1850's three prominent scholars; namely E. Durkheim, S. Freud and F. D Saussure were born and they were recognized later on as the founders of sociology, psychology and linguistics respectively. Within that atmosphere language was defined as a social phenomenon and it was studied as such.

Saussure who himself grew within the tradition of the neogrammarians rejected after awhile some of the assumptions of the neogrammarians; namely the belief that what is not historical in linguistics is not scientific. Instead he proposed new ideas which actually revolutionized linguistics in some sense. Among those ideas in the notion of synchronic description as opposed to diachronic one. By doing so, Saussure was determined to make the new type of description scientific through considering language as a social fact which has a real existence.

Saussure made no empirical or field studies as his successors especially in the United States did. He rather devoted his linguistic studies to theorization about language general. As a result of this theorization about the syntagmatic and paradigmatic relations of the linguistic sign, Saussure introduced the notion of exactness which is undoubtedly essential to synchronic description (Dineen, 1967) and to any science in general. By doing so, Saussure laid the foundations and the principles of synchronic linguistics which



dominated language description during this century. Commenting on Saussure's contribution to the study of language, Bloomfield (1924: 319) remarks that he "has given us the theoretic basis for a science of human speech".

The subject matter for Saussure was identified as *la langue* and not *parole* for the simple fact that the former belongs to society; that is being social and collective. So the emphasis is laid on the social dimension of language rather than on the individual one. It is also obvious that Saussure (1959: 6) stresses the psychological dimension of language when he says that "everything in language is basically psychological including its material and mechanical manifestations such as sound change". Therefore, it is safe to conclude that he approached language as a socio-psychological fact. Saussure's notion of exactness which is considered basic to linguistics as a science represents the most important contribution. Nevertheless, linguistics is recognized as a social science after all.

## **V- LINGUISTICS AS A BRANCH OF BEHAVIOURIST PSYCHOLOGY.**

Impressed by the philosophy of behaviourism, an off shot of empiricism, which was dominant during his time, Bloomfield decided to employ it in the study of language. Therefore, he rejected traditional or mentalistic psychology in favour behaviourist one. Accordingly, language was viewed as a simple behaviour which is formed as a set of habits built up by a process of "conditioning" and "reinforcement". In this case, a linguist deals with a type of human behaviour. In fact, what happened may be described as a shift of focus from the unobservable to the observable in order to attain some sort of compatibility with the concept of science prevailing at the time. Bloomfield (1939: 13) wrote in this regard that "science shall deal only events that are accessible in their time and place to any and all observers or only with events that are placed in coordinates of time and space". This is actually an advocate of physicalism in linguistics.

Bloomfield set up two important goals for him to achieve regarding the nature of linguistics; that is to make it both scientific and autonomous. He hoped to do so by adopting behaviourism. He, therefore, insisted upon searching for empirical evidence in terms of concrete data. He, furthermore, rejected the deductive approach used by earlier scholars and he proposed, instead, an inductive approach. Therefore, he asserts that "the only useful generalizations about language are inductive generalizations. Features which we think ought to be universal may be absent from the very next language that becomes accessible" (Bloomfield, 1933: 20). Bloomfield's (1926) postu-



lates for linguistic demonstrates his deep concern about the scientific principles of this science. Praising his contributions to linguistics. Bloch (1949: 92) wrote "There can be no doubt that Bloomfield greatest contribution to the study of language was to make a science of it. Others before him had worked scientifically in linguistics; but no one had so uncompromisingly rejected all prescientific methods, or had been so consistently careful in writing about language, to use terms that would imply no tacit reliance on factors beyond the range of observation".

Although Bloomfield declared his intention concerning the fact of employing behaviourism in the study of language, he limited the application of this philosophy of science to the definition of meaning only. One gets surprised for the complete absence of behaviourism when he dealt with the other components of grammar, namely phonology and syntax. Linguists such as C. Fries and C. Hockett who succeeded him adopted his views and developed them further. For them, the goal of linguistics has been to describe and classify linguistic data. Hockett (1942: 3) clearly declared that "linguistics is a classificatory science".

y employing behaviourism in the description of human language and his insistence on rejecting all unobservable data, Bloomfield succeeded to large extent in applying the scientific method in language. It is true that Bloomfield's method freed linguistics from traditional mentalism that dominated linguistic studies in previous years, but it laid some restrictions on the scope of linguistics by considering language, the subject matter of linguistics as just one type of behaviour and ignoring any mentalistic nature of language. By this virtue, linguistics may be described as an externalized or behaviourist discipline as opposed to internalized or mentalist discipline advocated by Chomsky later.

## **VI- LINGUISTICS AS A BRANCH OF COGNITIVE PSYCHOLOGY.**

he introduction of the transformation a'-generative theory in the second half of this century by Noam Chomsky is considered one of the major breakthroughs in the history of linguistics (Hockett, 1965). It is believed that chomsky has made a revolution in this science (Searle, 1972, Newmeyer, 1986). There is no least doubt that this is a true characterization and assessment of Chomsky's contributions to linguistics. In simple words, what has happened is a replacement of an old paradigm by a new one and this runs in accordance with Kuhn's philosophy of scientific revolutions who states that "scientific revolutions are...those non-cumulative developmental episodes in



which an older paradigm is replaced in whole or in part by an incompatible new one" (1962: 91).

on of Chomsky's predecessors did contribute significantly to formalizing the study of language and making science of it as alluded to earlier. Some of their contributions may even be considered revolutionary in some sense but Chomsky remains the most important figure in the history of linguistics up to the present time who has caused a true revolution in this science which affected almost every aspect of this science. Firstly, the subject matter of linguistics has been shifted to competence of the ideal speaker-hearer. Performance according to him cannot be taken as the subject matter of linguistics for a number of reasons which need not be discussed here. For Chomsky, language is an abstract, creative, innate and universal phenomenon and this is how it should be studied. This idealistic position made Chomsky reject all variations from the subject matter (1965). Secondly, Chomsky rejected the empiricist approach in favour of a rationalist formal-deductive one. Thirdly, the goal of linguistics has been outlined as the identification of the grammatical rules that underlie the construction of sentences. Fourthly, evaluation procedures have replaced the discovery procedures because Chomsky believes that mechanical procedures cannot be used as a part of science in order to discover the truth. Hypotheses are to be constructed at the beginning, then they are tested according to intuitive judgements given by native speaker of the language. Accordingly, there is no need to deal with primary data as the necessary starting point as the structuralists insist. The assumption upon which this belief is built is the fact the grammar of the language has a psychological reality on the ideal speaker-hearer and that the linguist's task will be to give an accurate description of this reality. Finally, Chomsky has revitalized the notion of universal grammar which was proposed during the medieval period by Roger Bacon and others later on. This brief summary of some of some of Chomsky's important new ideas may suffice purpose here.

Following the publication of Chomsky's book entitled *Syntactic Structures* in 1957, Lees, in his review of this little book, wrote "Chomsky's book on syntactic structures is one of the first serious attempts, on the part of a linguist to construct within the tradition of scientific theory-construction a comprehensive theory of language which may be considered in the same sense that a chemical, biological theory is ordinarily understood by experts in these fields" (1957: 376).

Chomsky has benefited considerably from the intellectual trend of the time as well as from contemporary linguists such as Zellig Harris, Roman Jakobson and others who have provided him with essential ideas about linguistics. Although he adopted a rationalist line, he made use of Goodman's



and Quine's empiricist and philosophical thoughts. As Koerner (1976 : 705) put it "such scholars played the role of catharsis rather than genesis". Overall, three major sciences seem to have played an important role in shaping Chomsky's linguistic thoughts. They are mathematics, physics and symbolic. His technical terminology such as model, structure, general theory, derivation, device, chain, finite state, input, output, generate, produce, projection, machine, and evaluation procedures undoubtedly belong to the above sciences (Koerner, 1976). Chomsky's main aim has been to establish precision in linguistic description and he has admirably achieved it. Commenting on this particular contribution, Lyon (1991) : 42) asserts that "Chomsky's most original, and probably his most enduring, contributions to linguistics is the mathematical rigour and precision with which he formulated properties of alternative systems of grammatical description".

For Chomsky, "linguistics is simply that part of psychology that is concerned with one specific class of steady states, the cognitive structures that are employed in speaking and understanding" (1975: 160). This shift of focus demonstrates how linguistics as a science has been defined within a new intellectual atmosphere. Chomsky goes even further to align linguistic with natural sciences and biology in particular. In this regard he says that "linguistic, conceived as the study of L. Language and So, becomes part of psychology, ultimately biology. Linguistics will be incorporated within the natural sciences insofar as mechanisms are discovered that have the properties revealed in these more abstract studies" (1986: 27).

Two observations may be made here concerning Chomsky's linguistics. One is the fact that Chomsky has rejected linguistics as an inductive science or model advocated by the structuralists simply because this type of science or model fails to account adequately for all linguistic data in the language. Alternatively, a deductive model will succeed to do so effectively. Such model has proven to be the best so far. The second observation concerns the autonomy of linguistics. Chomsky is said to have advocated the autonomy of linguistics in his earlier writings especially in his book entitled *Syntactic Structures*. In his later works, as the a forequoted statements demonstrate the scope of linguistics is however, broadened to include other subjects such as psychology and philosophy (Lyons, 1991). Therefore, what is called autonomous linguistics has been abandoned altogether. Linguistics is now a branch of cognitive psychology at the surface structure, and a branch of natural science at the deep structure.



## VII- CONCLUSION.

The previous discussion should have made it clear that linguistics as a science, has derived many of its theoretical principles from different sources and it took it along time to establish its foundations as a science. Linguistics is both an inductive and a deductive science depending on how one views it in terms of one's linguistic affiliation and commitments. What is called autonomous linguistics seems to lack strong arguments for the fact that the subject matter of this science is unique in nature. It depends on how you view it and deal with it as an object of study. Language may be viewed as a means of something, or as an internal phenomenon or as an external phenomenon or as a natural phenomena, or as a philosophical phenomenon or...etc. Could language one day be approached as a pure linguistic phenomenon and linguistics becomes a pure linguistic science rather than a branch of another science? It is doubtful because of the nature of this subject matter and therefore linguistics will always be a branch of another science.

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