Structural Linguistics: American Structuralism
Part One: Leonard Bloomfield
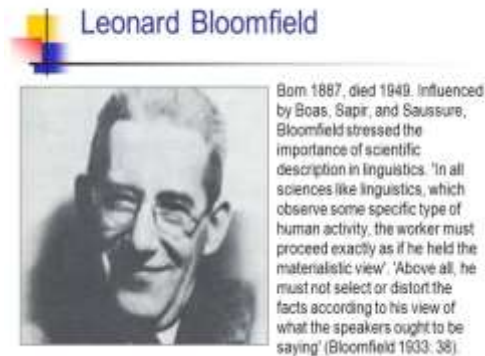
Introduction:

Leonard Bloomfield (*April 1, 1887 – April 18, 1949)* was an American linguist who led the development of structural linguistics in the United States during the **1930s** and the **1940s**. His influential textbook *"Language",* published in **1933**, presented a comprehensive description of American structural linguistics. He made significant contributions to Indo-European historical linguistics.

Bloomfield's approach to linguistics was characterized by its emphasis on the scientific basis of linguistics, adherence to behaviorism especially in his later work, and emphasis on formal procedures for the analysis of linguistic data. The influence of Bloomfieldian structural linguistics declined in the late 1950s and 1960s as the theory of Generative Grammar developed by Noam Chomsky came to predominate.

1/ Language Description:

It was in America that structural linguistics developed. However, linguistics began as an offshoot of anthropology. American anthropologists *(Franz Boas and Edward Sapir)* were concerned to establish good descriptions of the American Indian languages and cultures before they disappeared.

This state of affairs changed with the publication in 1933 of Leonard Bloomfield's book entitled *"Language",* that remained the best introduction of linguistics for more than 30 years, and which attempted to lay down rigorous procedures for the description of any language. Bloomfield considered that linguistics should deal **objectively and systematically** with observable data. So, he was more interested in the way items were arranged than in meaning. In other words, Bloomfield was rigorously scientific; concentrating on methodical, systematic and formal analysis. He described language just superficially and admitted that it is a tremendously complicated phenomenon. Bloomfieldian approach came to be called *"Structuralism"* because of the various kinds of techniques it employed to identify and

classify features of sentences structure (in particular the analysis of sentences into their constituent parts or what is known as *"Immediate Constituent Analysis (I.C.A.)"*.

Bloomfield focused his attention on the sentence level; he started putting his theory into practice and came with two terms **"Immediate Constituents"** and "**Ultimate Constituents".** To explain them he gave his famous example: **poor john ran away.**

He divided this sentence into two parts poor John/ran away; he called these two parts "the immediate constituents" of the sentence, and then provided further divisions until no more division can be made and called them "the ultimate constituents".

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                          Poor John ran away


          Poor John                         ran away


   Poor            John              ran              away
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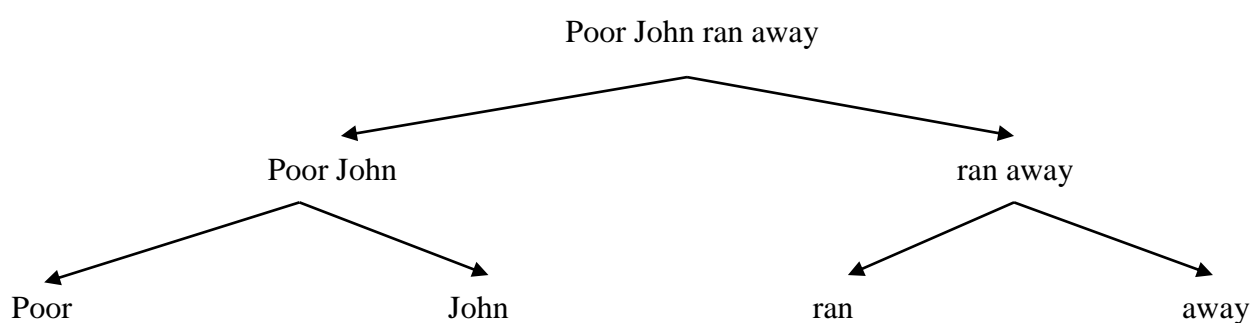
Such a procedure for analyzing a sentence has been advocated by many linguists under different drawing like **the Chinese Boxes or Bracketing**.

However, there are many problems involved in this technique:

1- It is not always clear where to put the cut between constituents. Normally, it is possible to decide intuitively where to put the dividing lines between constituents on the bases of the way in which the meaning of the sentence is organized.

2- The kind of the relationships existing between sentences is obscured. There is no way to find the relationship between active and passive sentences. I.C.A precedes one sentence at a time; it can suggest an analysis for the active voice, and another one for the passive voice; but it cannot provide us with the information that these two forms are closely related in meaning. Similar examples would be the relationship between *statements-questions, positive-negative sentences, attributive-predicative adjectives…*

When someone knows a language, it means above all that he knows when there are two ways of expressing the same thing. It means also he is able to manipulate the roles of the language to produce different other similar sentences. Therefore, I.C.A can be considered as a starting point for analyzing sentences only; it can be viewed as a very small part of what a grammar has to do.

2/ Language Meaning:

As far as meaning is concerned, Bloomfield emphasized on the scientific definition of everything to which language may refer. In this sense he said:

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 that 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" and "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.

(Language, P: 139)

Bloomfield's conclusion was a pessimistic one. He said: *"the statement of meaning is therefore the weak point in language study and will remain so until human knowledge advances very far beyond its present state."*

(Language, P: 140)

So, Bloomfield's argument implies a vision of an eventual period when everything would be capable of authoritative scientific definition.

Three flaws were latent in Bloomfield's approach:

-Firstly, at any given time, there are usually competing scientific accounts of the same phenomenon. Which of them can we choose for our definition?

-Secondly, since scientific statements are by nature "provisional", it is difficult to foresee a time when everyone would be sufficiently confident that no further significant reformulations would be forthcoming, to be able to start safely defining words like love and hate.

-Thirdly, a definition in terms of "scientific formula' such as, salt=NaCl, simply exchanges one of linguistic symbol for another.

Assuming that scientific language like everyday language has meaning, we are faced with the problem of defining the meaning of 'NaCl'. So, Bloomfield's recipe for discovering meaning led us into a path of infinite regression, and it turns-out to be a "dead end".

3/ Language Acquisition:

Distinction between acquisition and learning:

Acquisition: is *a sub-conscious process*, similar to that in which children develop ability in their mother tongue that is language acquirers are using the language to interact or more precisely to communicate, without being aware of its acquisition.

**Learning**: includes knowing the rules, studying them and using them. It appears, therefore, to be _**a conscious process.**_

As far as language acquisition is concerned; the behaviorists assumed that at birth the human mind is a _**blank slate**_ waiting for impressions and expressions to make their recordings there.

The child learns his mother tongue by imitating people around him using the process of _**"trial and errors».**_ All in all, the behaviorists explain language acquisition in terms of _**imitation**_ and _**selective reinforcement**_ (parental approval is an important type of reinforcement in the language learning process: when a child produces grammatically correct utterances, which is understood by his environment, approval from the parents may serve as reinforcement for such an utterance. In this way, the environment encourages the child to produce other correct grammatical utterances).

The behaviorists or the connectionists learning theories describe behavior using an _**SR model**_; a connection is established between a stimulus or a stimulus situation_(S)_ and the organism's response to this stimulus _(R)_. The main representative of this approach to the study of behavior is Skinner .Skinner's theory of conditioning viewed language as being a set of habits, a verbal behavior, and association between stimuli and rewarded responses.

The Impact on language teaching:

The behaviorists approach had an enormous impact on language teaching. It provides the theoretical underpinning of the widely used audio lingual method of the 1950's & 1960's based on the behaviorists' stimulus response concept. (New language should be dealt with the sequence 'hear, speak, read and write'. Frequent repetition is essential to effective learning .All errors must be immediately corrected).

Criticism:

Generally speaking, the behaviorists of the corpus-based approach was of the height of its popularity in 1940s.Unfortunately it had several draw backs; it lacks the natural creativity, learners in final evaluation were unable to express themselves and communicate in any given situation .Besides, it is too mechanistic and rigidly distributional.

Taxonomic Grammar

Over the first two decades of the previous century, a fundamental change in direction in linguistic studies took place. This change is characterized as a shift from an *item-centered view* of language to *a structure-centered one*. According to structuralists sounds, words or parts of sentences have no linguistic significance in themselves, they have significance only as they contrast and combine with other items in the patterns of a linguistic system. Structuralism in this respect has distinct senses in current linguistic studies. In its general sense, *structuralism is based on the assumption that each language is a unique relational structure and that the analysis of the language is based on the study of the elements of the language not in isolation but parts of the system as a whole.* In its *narrow sense*, structuralism refers to the view and methodology followed by those American linguists in the 1940's and the 1950's known as *"Structural Taxonomic" or "Bloomfieldian Grammar".* Structural refers to the preoccupation with form rather meaning. Taxonomic characterizes the inductive procedures of classification and the type of linguistic analysis which is concerned with the segmentation and classification of utterances without reference to the deeper level or organization in language.

Taxonomic linguists, by contrast to traditional grammarians, based their work on the assumption that grammatical categories (previously set in traditional grammar like parts of speech, tenses, mood…) should be defined not in terms of meaning but in terms of distribution, and that the structure of each language is to be described without reference to the universality of such categories. Taxonomic grammarians defined four classes of forms and three groups containing 15 functional words.

The four classes are:

Class 1: **Nouns.**

-The Concert was good.

-The boy remembered the story.

-The teacher went there.

Class 2: **Verbs**.

-The Concert was good

-The boy remembered the story.

-The teacher went there.

Class 3: **Adjectives.**

-The Concert was good.

-The good concert was long.

Class 4: **Adverbs**.

-The long story was told slowly.

-The girl cooked the cakes quickly.

The three groups of function words:

Group A: contains all words of the position in which the word "the" appears: a, an, any, some, one, three, this, those…

 Eg: this movie is interesting.

Group B: contains all words of the position in which the words "may, would, have" appear.

 Eg: the movie may be good.

Group C: Contains only one word which is "not" (negation).

 Eg: the movie was not interesting.

There is a considerable degree of correspondence between the groups of function words and such traditional terms as article, preposition…etc. The procedure of taxonomic linguists are concerned with a formalization of surface structures (a type of analysis which segments each sequence of elements of a sentence into its constituent parts in such a way that all the elements in the analysis are related to the linear arranged sequence of events in the original sentence.)

For example:

Henry enjoyed his first visit.

1   2   A   3   1

Henry /enjoyed his first visit.

   enjoyed his first visit.

                  his first visit.

                      first visit.

                          visit.

        One of the most widely used techniques for displaying sentence structure is the use of its immediate constituents.ICA is a term used in grammatical analysis to refer to the major division that can be made within a syntactic construction. The procedure was a major feature of Bloomfieldian structural linguistics. The approach works through the different levels of structure within a sentence in a series of steps. At each level, a construction is divided into its major constituents and the process continues until no further division can be made.
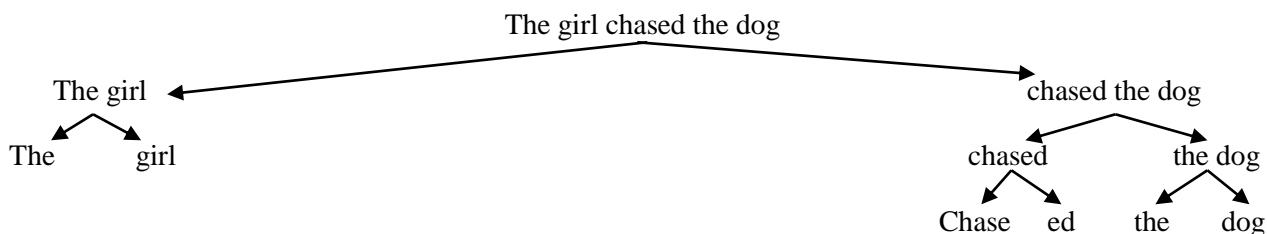
Weaknesses of ICA:

All sentences are easy to analyze in ICA terms, but sometimes it is not clear where the cuts should be made, for example: old men and women .Whether we take: (old men) and (women).or (old) (men and women).Moreover the process of segmenting sentences does not provide enough knowledge of the grammar of a language and of how sentences are related to each other grammatically (statements and questions or passive and active).

Another way of putting more information into an analysis would be to name or label the elements that emerge at each time a sentence is segmented.

Let us consider the following example: The friend will open the door. The analysis of this sentence including label technique will be as follows: It is a sentence(S) which consists of a NP: my friend, and a VP: will open the door; the NP consists of a determinant (det): my and a noun (N): friend. The VP consists of a verb (V): will open and a noun phrase (NP): the door; the verb consists of an auxiliary (aux): will and a nucleus of the verb (V): open. The noun phrase: the door consists of a determiner (det): the, and a noun (N): door.

An economic way of describing the analysis of the sentence is its representation in a labeled tree diagram:
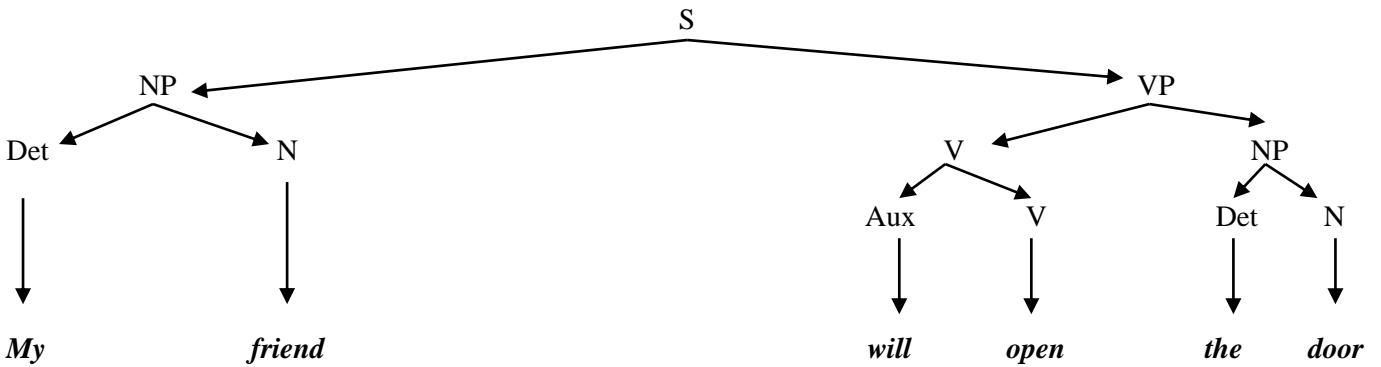
This kind of representation of the phrase structure of this sentence is called ***Phrase structure or Phrase Marker (P-marker).***

Phrase Structure Grammar : Phrase structure rules:

1) S   ⟶   NP+VP.
2) VP ⟶ verb+NP.
3) NP ⟶ det+N.
4) Verb ⟶ aux +V.
5) Det ⟶ my…………….the.
6) N   ⟶ friend…………girl.
7) Aux ⟶ will…………..have.
8) V   ⟶ open………………..