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LANGUAGE IN APPLIED LINGUISTICS: A HISTORICAL PERSPECTIVE

The article presents an outline of the main tendencies in the formation of applied linguistics from the historical perspective. Modern applied linguistics as an academic discipline offers effective mechanisms of integrating various branches of theoretical linguistics due to two main postulates all modern schools of linguistics agree on, i.e. non-material nature of language and the necessity to implement information technologies into linguistic research. The main achievements of modern theoretical linguistics are viewed through their ability to be used for the problem solving in the real world. Thus, we suggest that modern applied theory of language may consider language from three different points of view. It may be interested in (1) how the language sounds or looks (language as a state), (2) how it works (language as an activity), or (3) how it develops (language as change). If it is interested in how the language sounds or looks, the theory will include something on language considered as a fixed state – either as a state dependent on what people think and do, or as one which is independent of this. Dependently, language may be considered as human thought or as human behaviour. Language may be viewed as an independent state, either as structure, or as a system of communication. The view of language as an activity is concerned with the way language operates or is operated by man. From this point of view, language may be considered as an activity of the mind, or an activity of the brain. Language may also be regarded as something which is continually changing in time, or in space. In this respect it's possible to single out such branches of applied linguistics as speech acquisition, area linguistics, and contrastive linguistics. The suggested conceptual scheme opens new perspectives for developments of modern applied linguistics as well as new mechanisms of the verification of its research results.

Key words: applied linguistics, language, state, activity, change.

Formulation of a research problem and its significance. Within the recent decade rapid development of various branches of modern applied linguistics has caused a new splash of scientific interest towards the faculty of language. Regardless of the diversity of present linguistic paradigms, all modern theories of language agree on two basic postulates: 1) non-material nature of language, and 2) the necessity to implement information technologies into linguistic research. Each of the above mentioned presuppositions involves the establishment of the specific methods of formal language description, due to which language can be viewed as a tangible object of scientific research.

In the present article on the basis of the historical approach to the development of applied linguistics we aim at providing an overall and scientifically explicit scheme of approaching the faculty of language from three different perspectives – as a state, as an activity, and as change. The suggested scheme will specify the particular approach to language in the field of modern applied linguistics. This approach will help to differentiate applied linguistics from theoretical linguistics and pure philology, since the suggested conceptual differentiation will result in further methodological verification of the results of linguistic investigation.

Statement regarding the basic material of the research and the justification of the results obtained. Language may be regarded as being composed of elements of thought. This is the traditional view. In the early twentieth century, F. Brunot [3] developed this view into a theory treating of the relation between language and thought. He first divided language into five categories of thought – beings, facts, circumstances, modalities and relationships – and then attempted to show how each of these is expressed by the French language. He made no distinction, however, between structure and vocabulary.

As Behaviour

Language may also be regarded as being composed of units of behaviour. Not only the anthropologists and sociologists, but also certain linguists, consider language thus. K. L. Pike [11] places language in the context of human behaviour in general, in which all social acts, including language, are

divided into units of significance (*emic units*), each containing a number of non-significant variants (*etic units*).

Another linguist who regarded language as behaviour was G. K. Zipf [15], who made the state of language dependent upon the principle of least effort. According to this principle, the forms of the language used in human behaviour become a compromise between the desire of the speaker to get his ideas and feelings across with the minimum of effort and the desire of the hearer to understand them, also with a minimum of effort.

2. Independent

Language may be viewed as an independent state, either as structure, or as a system of communication.

As Structure

The idea of language as structure goes back to the teachings of F. de Saussure and his disciples, who regard language as a structure of values between which systematic relations can be observed. Saussure's basic notion is developed in a number of structural theories. Among these is Glossematics [6]. Glossematic theory considers a language as a system of internal relations, as a self-subsistent whole which consists of nothing but relations or functions – a web of functions. Using the methods of formal logic, it aims at describing the internal structure of a language completely, as simply as possible, and without contradiction. The language is therefore considered as an interplay of purely formal relations.

Other linguistic theories which consider language as structure are those of L. Bloomfield and N. Chomsky. L. Bloomfield [2] considers the structure as a line or sequence of the smallest units of the language, that is, as a sequence of its phonemes. N. Chomsky [4], on the other hand, starts by considering linguistic structure itself as a theory which generates all and only grammatical sentences. Considering language as a mechanism for generating sentences, his theory uses a chain of transformations to link the most general structures of language, the sentence patterns, to the sequences of phonemes uttered as sound patterns. The theory attempts to explain how the limited number of structural elements in a language can produce an unlimited number of sentences.

As a system of communication

Although communication is not language, language can be communication. It can also be much more – and much less. Language considered from a communications point of view is the transmission of messages; it is the choice of a sequence of symbols from a reservoir of code. Indeed we use language as if we had to choose words one after another. Once a word or sound has been chosen, the choice of the one following is governed by the laws of probability. Thus, if the word is the, the probability of the next word in the sentence being an article or a verb is very small indeed. It is in this way that information theory regards language. "Information" here is a technical term, different in meaning from its usual colloquial sense. This understanding of language has been reflected in the *mathematical theory of communication* [12].

The language studied in the science of communication is the language of averages. It requires long statistical analyses of languages and specific methods for studying the results. These have been compiled and elaborated in such useful general studies of *quantitative linguistics*. *Statistical analyses* are of interest to Applied Linguistics in so far as they give information on items which are most often used in a language. They are also of interest to those who base their structural analysis of a language on samples of texts. Since we cannot observe all of the spoken or written sentences used in any one language but only a relatively small sample, linguistic analysis is to that extent necessarily statistical.

Language as activity

In contradistinction to the view of language as a state made of elements of thought or behaviour, or of units of structure or communication, is the view of language as an activity. It is concerned with the way language operates or is operated by man. From this point of view, language may be considered as (1) an activity of the mind, or (2) an activity of the brain.

1. *As an activity of the mind*, language may be regarded either (a) *as mental movement*, or (b) *as stimulus-response*. The study of language *as mental movement* is called *psychomechanics* [5]. Its basic postulate is that the mental operations involved in the use of language necessarily take a certain amount of time, infinitesimal though this may be. The task of psychomechanics is to identify these mental operations and to refer them to mental time in an effort to demonstrate the mental process involved in acts of

language. The study starts by delimiting the degrees of abstraction through which our minds seize and represent the world of experience. Such an approach is fundamentally different from the traditional analysis of language as a group of static, logical categories.

Psychomechanics attempts to explain how language, the institutional system, becomes usage in the individual acts of speaking and writing. Usage is considered essentially as a process of mental expression by means of acts of abstraction capable of producing such different types of linguistic categories as the parts of speech, inflectional forms, and vocabulary.

In view of *stimulus-response idea*, psychologists, and certain linguists as well, have long considered language as a verbal response to external stimulus. This trend is called *behavioristic theory*. Language is regarded as an immediate animal-like reaction to what is perceived [13]. It is as if language were a long series of conditioned reflexes. A number of linguists have regarded language in this way and have composed applied methods for language teaching from this point of view. Such methods present and drill unanalysed units of language as complete utterances, always given in association with the appropriate situation.

The contextual stimulus-response view differs from this in that it teaches the language as a constant variation in the stimulus to fit a corresponding variation in the language response, thus leading the learner to abstract the patterns of language by seeing the relation between each element of the situation and the corresponding element of the response.

This view of language evolved from the *contextual theory* of C. K. Ogden and I. A. Richards [9]. According to this theory, the stimulus of experience comes to us in repeated contexts. These may be physical events which reach our minds through our senses; or they may be events in the mind itself – memories, associations of ideas. Whatever they be, these contexts are continually associated with certain elements (e.g. words) in the language which then become symbols of elements in the context. These symbols, from the speaker's standpoint, are always subordinate to what they stand for; from the hearer's standpoint, they are equal. The hearer first perceives the sound as sound. He then recognizes sounds as distinctive units; he does so because similar sound sensations in the past were always associated with signs. He then recognizes simple referents (e.g. names of things), and finally complex ones. The complexity of the referent, however, is not necessarily reflected in the complexity of the symbol; a single word can stand for a complex idea. But it is not the single word which determines the reference; it is its interconnection with the other words in the sentence.

Language may be considered as only partly a matter of stimulus-response. It is partly concrete activity; partly abstract activity. The concrete perceives and reacts to situations in an animal-like way, through verbal responses to immediately perceived cues and associations, in an automatic type of speech behaviour. The abstract conceptualizes and categorizes. Everyday speech is a combination of both.

2. Language as an activity of the brain

If some linguists regard language as an operation of the mind, others prefer to consider it as an operation of the brain. They study this operation of the human brain as a physical activity. In order to understand the nature of this activity, two approaches have been developed:

1) The first consists in an analysis of speech reactions during local interferences with the brain (the approach through *neurology*);

2) The second is the construction of models and devices which function as analogues of the human brain (the approach through *technology*).

Since all stimuli leave a trace on the brain and a language sign is an association between two stimuli, the acoustic image and the concept, this sign may theoretically be found in the brain. The localization of speech areas in the brain goes back to 1861, when Broca pointed out the relationship between language and the cortex of man's brain. In recent years, neuro-surgeons have been able to locate the different areas in the cortex which control hearing and speech, memory and thought, and to formulate theories as to their function and interrelation. W. G. Penfield [10], working in this field for more than a quarter of a century, made verbal tests on hundreds of patients during brain operations. This enabled him to construct a theory based on speech areas and to assume that the organization and co-ordination of the speech mechanisms are carried out by nerve-cell connections, all within the same half of the brain, the dominant one.

Most of those who study the linguistic activity of the human brain no longer believe that it is a matter of mental images. It is rather a matter of nerve impulses traveling along networks. These seem to correspond to the statistical properties of language. Recent neurological theories have led to speculation by theorists of language in a number of different directions. A science of "speculative neurology" has even arisen. Nerve-cells, which are all-or-nothing firing devices, operate in a two-unit system, building networks in which every linguistic form has its position. Some linguists believe that the nerve-cells are arranged in loops, around which signals circulate and may be remembered by firing one another in succession around the loop and back to the first cell, where the cycle is started anew on its next round.

Similarities have also been found between certain *brain disorders* and certain fundamentals of language. R. Jakobson [7] has compared the basic types of loss of memory with the basic characteristics of language. One type affects the ability to put words together in the right way; the other type affects the ability to substitute one unit for another.

There is still no definite answer to the question whether the dividing of speech into units like phonemes and words is done in the mind of the speaker, or only in the mind of the linguist. Applied linguists set up experiments which aimed to obtain from speakers and listeners certain responses which correspond to the theories and observations of the linguists. But this sort of experiment is more difficult than it seems, for each speaker and listener brings to the language his own special responses which are due to his peculiar nervous system and his own unique combination of memories and experiences in the use of the language; it would often seem that he interprets what he hears according to his own liking.

The second approach to the linguistic operations of the human brain presupposes the construction of models of it, theoretical models and working models.

Theoretical models have been built for the purpose of studying of the activity of the brain. One of these is the *chromatoscope*, a sort of mechanical generator of linguistic hypotheses, in which both words and concepts are regarded as "molecules of experience", particles of "meaning" being the atoms out of which these molecules are built. The atoms of meaning are considered as active "packets of information" capable of activating other atoms. Theoretical models such as these only suggest possible approaches to the study of the linguistic activities of the human brain [8].

As for the working models, it is the so-called "electronic brain" that is expected to lead to an understanding of how language operates in the brain of man. These devices, although greater in working capacity and efficiency than the human brain, are extremely limited in the variety of their activities. Their greatest achievement has been in the field of *mathematical computation* and *cybernetics* [14].

Some mathematicians, however, have denied any close analogy between such digital computers and the construction or activity of the human brain. They point out the historical and contingent character of both mathematics and the natural languages. Moreover, it is reasonable to expect that any adequate theory of brain functioning should have statistical characteristics which display plurality, probabilism, variability, redundancy, and tolerance of small errors. No machine having a unitary mechanism, a fixity of properties, an economy of connections, a certainty of output and an intolerance of small errors can successfully simulate the brain. If and when such an analogue with the proper characteristics is developed, its contributions to linguistic psychology could be profitably correlated with the findings of the neuro-surgeons. If in turn these could be correlated with the analytical and inferential work of linguists, our knowledge of the two extremes of the act of human communication – two minds communicating through language – may yet reach the exactness of our knowledge of the sound-waves which occur between them.

Language as change

While some scholars consider language as state or activity, others regard it as something which is continually changing (1) in time, or (2) in space.

In Time

A theory may cover variations in language over a period of time, either (a) in the individual, or (b) in the society in which the language has been used.

a) In the Individual

Analysis of change in the speech of the individual is generally confined to the study of the linguistic development of children. This is a field of modern applied linguistics now known as Language

Acquisition, which is being rapidly developed in the USA, and in which important theories have been developed.

b) In Society

Today language is generally regarded as an ever-changing code. The changes are not considered as inventions designed by individuals to suit particular purposes; they are systems which arise from the interrelation of the many needs of thousands or millions of people. The mutually modifying practices of hundreds of non-relevant elements in the speech of many individuals eventually bring about changes in the relevant elements which form the code of the language. We are continually altering, continually building the system of our language. It is as if the human mind were dissatisfied with the language it inherits and tries to correct and improve it. Usage seems to display a constant need to be brief, expressive, precise and consistent.

There is always room for change, for the vast majority of possible linguistic items and patterns are never used. Of all the possible sounds and forms, only a small fraction is selected by a given language. These are continually varied, combined and re-combined. Any language selects certain features or procedures (like word-endings or word-order), using them more or less consistently and varying the elements in as many combinations as needed. It is through selection and variation that languages evolve. Historical changes continually vary established patterns but only in certain ways. The variation is selective. As patterns are eliminated new ones are chosen to replace them. Each distinctive system evolves in a set pattern, whatever the phonetic or morphological process may have been which first set the pattern.

In Space

Variations in space have also given rise to various theories of language. Linguists have studied the variations in space of a single language in the present or of a group of languages traceable to a common ancestor. The first of these disciplines is known as area linguistics, the second as comparative linguistics.

Area linguistics has produced theories to explain changes in a language from one part to another of the area in which it is spoken.

Some words are used in all parts of the country in which the language is spoken; others are limited to certain regions. Of the latter, some are limited to one region only, while others cover a number of different regions. The vocabulary of each region differs in both extent and extension.

The differences found from region to region are not limited to vocabulary; they also include pronunciation and grammar. In any area in which a language is spoken, however, we can find different forms of the same word, each representing a different phase of development; some of these are identical with words and forms found in areas in which a different but related language is spoken. In these areas too a word may have a number of different forms shading off into those of still another language area so that there is no clear-cut distinction between adjacent languages like Spanish, Portuguese, Provençal, and Italian, or between German, Dutch, Flemish, Frisian, Plattdeutsch and certain dialects of English. For this reason, the delimitation of languages is arbitrary and, according to some area linguists, purely political.

Theories of area linguistics like that of M. G. Bartoli [1] have tried to establish principles for arranging these shades of difference and for determining the form from which these arrangements should start. According to M. G. Bartoli the older forms are found in areas which are either isolated (islands and mountains), extensive, marginal (language boundaries), first settled, or areas in which the language is disappearing.

In order to record the difference in words and the shades of differences in forms and pronunciation, samples of language usage have been gathered from all parts of the area in which the "same" language is spoken. These are plotted on maps of the area (often one map per word), and the result is a linguistic atlas. There are linguistic atlases for France (by J. Gillieron and E. Edmont (1912)), Germany (by F. Wrede, W. Mitzka, B. Martin 1953), parts of the United States (H. Kurat 1939), Switzerland, Italy, and other countries. In still other countries, notably in Scotland, England, Ireland, Spain, Canada and areas where Romance, Slavonic and Germanic languages are spoken, scholars have been building extensive dialect archives of usage in the various parts of their respective areas.

The relevance of area linguistics to Applied Linguistics lies in the possibility of deciding what forms to investigate on the basis of proven usage. It helps the researcher to distinguish between the

regional and the national. It also enables them to make use of the regional peculiarities which the native language may have in common with the foreign language.

Along with historical linguistics, *comparative linguistics* profited greatly from the nineteenth-century studies of evolution and from the demanding techniques required to prove the origin and relationship of biological species. Proven relationships were formulated into scientific laws, like Grimm's Law and Verner's Law, some of them admitting of no exception. Genetic theories of the origin and spread of related languages were developed and refined from the comparative studies of F. Bopp, A. Schleicher, K. Brugmann, B. Delbruck, and others.

Conclusions and prospects for further research. The presented above review of the three basic approaches to language in applied linguistics enables the exact positioning of any modern branch of linguistics due to the practical application of the research results. Obviously, any modern school of linguistics, no matter how diverse and specific their objects of research are, is supposed to suggest relevant ways of applying their results. In the era of modern computer technologies and cybernetic systems the ability to provide formal description of some specific linguistic phenomena gives many extra opportunities to resolve real world tasks by means of applying linguistic knowledge. Thus, the suggested conceptual and methodological accuracy in understanding the faculty of language opens new perspectives for the structural division of linguistics as well as for the effective application of linguistic knowledge in the real world's problem solving.

Bibliography

1. Bartoli M. G. *Saggi di linquistica spaziale* / M. G. Bartoli. – Torino : Bona, 1945. – 306 p.
2. Bloomfield L. *Language* / L. Bloomfield. – London : George Allen and Unwin, 1933. – 564 p.
3. Brunot F. *La pensée et la langue: méthode, principes et plan d'une théorie nouvelle du langage appliquée au français* / F. Brunot. – Paris : Masson, 1922. – 954 p.
4. Chomsky N. *Aspects of the Theory of Syntax* / N. Chomsky. – Cambridge, MA : MIT Press, 1965. – 271 p.
5. Guillaume G. *Langage et Science du Langage* / G. Guillaume. – Paris : Nizet, 1963. – 288 p.
6. Hjelmslev L. *Outline of Glossematics. A Study in the Methodology of the Humanities with Special Reference to Linguistics* / L. Hjelmslev, H. J. Uldall. – Copenhagen : Nordisk Sprog og Kulturforlag, 1957. – 564 p.
7. Jakobson R. *Fundamentals of Language* / R. Jakobson, M. Halle. – The Hague : Mouton, 1956. – 112 p.
8. Meredith G. P. *The Communication of Scientific Concepts and Models of Semantic Mechanisms* / F. P. Meredith // *The Advancement of Science*. – 1960. – No 18. – P. 110–117.
9. Ogden C. K. *The Meaning of Meaning. A Study of the Influence of Language Upon Thought and of the Science of Symbolism* / C. K. Ogden, I. A. Richards. – London : Routledge & Kegan Paul, 1949. – 363 p.
10. Penfield W. C. *Speech and Brain Mechanisms* / W. C. Penfield, L. Roberts. – Princeton : Princeton U. P., 1959. – 302 p.
11. Pike K. L. *Language in Relation to a Unified Theory of the Structure of Human Behaviour* : in 3 vols. / K. L. Pike. – Glendale (California, USA): Summer Institute of Linguistics, 1960. – 182 p.
12. Shannon C. E. *The Mathematical Theory of Communication* / C. E. Shannon, W. Weaver. – Urbana : Illinois U. P., 1949. – 132 p.
13. Skinner B. F. *Verbal Behaviour* / B. F. Skinner. – NY : Appleton, 1957. – P. 130–146.
14. Wiener N. *Cybernetics, or Control and Communication in the Animal and the Machine* / N. Wiener. – NY : Wiley, 1948. – 194 p.
15. Zipf G. K. *Human Behaviour and the Principle of Least Effort: An Introduction to Human Ecology* / G. K. Zipf. – Cambridge : Addison-Wesley, 1949. – 573 p.

References

1. Bartoli, Matteo. 1945. *Saggi di linquistica spaziale*. Torino: Bona.
2. Bloomfield, Leonard. 1933. *Language*. London: George Allen and Unwin.
3. Brunot, Ferdinand. 1922. *La pensée et la langue: méthode, principes et plan d'une théorie nouvelle du langage appliquée au français*. Paris: Masson.
4. Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
5. Guillaume, Gustave. 1963. *Langage et science du langage*. Paris: Nizet.
6. Hjelmslev, Louis, and Uldall, Hans Jørgen. 1957. *Outline of Glossematics. A study in the Methodology of the Humanities with Special Reference to Linguistics*. Copenhagen: Nordisk Sprog og Kulturforlag.
7. Jakobson, Roman, and Halle, Morris. 1956. *Fundamentals of Language*. The Hague: Mouton.
8. Meredith, G. Patrick. 1960. "The Communication of Scientific Concepts and Models of Semantic Mechanisms". *The advancement of Science*, 18: 110–117.

9. Ogden, C. K., and Richards, I. A. 1949. *The Meaning of Meaning. A Study of the Influence of Language Upon Thought and of the Science of Symbolism*. London: Routledge & Kegan Paul.
10. Penfield, W. C., and Roberts, L. 1959. *Speech and Brain Mechanisms*. Princeton: Princeton U. P.
11. Pike, Kenneth L. 1960. *Language in Relation to a Unified Theory of the Structure of Human Behaviour: in 3 vols*. Glendale (California, USA): Summer Institute of Linguistics.
12. Shannon, Claude E., and Weaver, Warren. 1949. *The Mathematical Theory of Communication*. Urbana: Illinois U. P.
13. Skinner, B. F. Verbal Behaviour / B. F. Skinner. – NY : Appleton, 1957. – P. 130–146.
14. Wiener, Norbert. 1948. *Cybernetics, or Control and Communication in the Animal and the Machine*. New York: Wiley.
15. Zipf, George Kingsley. *Human Behaviour and the Principle of Least Effort: An Introduction to Human Ecology*. Cambridge: Addison-Wesley.

Біскуп Ірина. Мова прикладної лінгвістики: історичні перспективи. Проаналізовано ключові тенденції формування царини прикладної лінгвістики в історичному аспекті. Сучасна прикладна лінгвістика як академічна дисципліна пропонує інтегративні механізми для співіснування різноманітних лінгвістичних шкіл на підставі двох основних постулатів, які безапеляційно приймаються всіма науковими лінгвістичними традиціями, зокрема: ідея про нематеріальну сутність мови та потреба у використанні інформаційних технологій у лінгвістичних дослідженнях. Запропонований у статті аналітичний підхід до узагальнення існуючих здобутків теоретичної лінгвістики з огляду на перспективи їх використання для задоволення потреб інших галузей суспільного буття людини уможливив виокремлення трьох підходів до вивчення мови: мова як стан, мова як діяльність, мова як зміна. У межах першого підходу мову розглядаємо у її зв'язку з конкретним індивідом (мова як думка і як форма поведінки) або незалежно від індивіда (мова як структура і як система комунікації). Другий підхід – мова як діяльність – дає можливість вивчати мову як діяльність свідомості та діяльність мозку, розмежовуючи у такий спосіб психолінгвістику й нейролінгвістику. Мову як зміну досліджують за допомогою висвітлених у третьому підході методів генеративної лінгвістики, ареальної й контрактивної лінгвістики. Наведена у статті система концептуальних орієнтирів і галузевого розгалуження сприяє наукометричному структуруванню сучасної прикладної лінгвістики та встановленню її чітких наукових пріоритетів і перспектив подальшого розвитку.

Ключові слова: прикладна лінгвістика, мова, стан, діяльність, зміна.

Бискуп Ирина. Язык прикладной лингвистики: исторические перспективы. Проанализированы ключевые тенденции формирования области прикладной лингвистики в историческом ракурсе. Современная прикладная лингвистика как академическая дисциплина предлагает различные интегративные механизмы сосуществования разнообразных лингвистических школ исходя из двух основных постулатов, безапелляционно воспринимающихся всеми научными лингвистическими традициями, а именно: идея о нематериальной сущности языка и необходимость использования информационных технологий в лингвистических исследованиях. Предложенный в статье аналитический подход к обобщению существующих достижений теоретической лингвистики в связи с перспективами их использования для удовлетворения потребностей других отраслей общественного бытия человека дает возможность выделить три подхода к изучению языка: язык как состояние, язык как действие, язык как изменение. При использовании первого подхода язык рассматриваем в связи с конкретным индивидуумом (язык как мысль и как поведение) или же независимо от индивидуума (язык как структура и как система коммуникации). Второй подход – язык как действие – дает возможность изучать язык как работу сознания и работу мозга, на основании чего различают психолингвистику и нейролингвистику. Язык как изменение является предметом изучения порождающей грамматики, ареальной и контрактивной лингвистики. Представленная в статье система концептуальных ориентиров и направлений в лингвистике способствует наукометрическому структурированию современной прикладной лингвистики, а также установлению четких приоритетов и перспектив последующих исследований.

Ключевые слова: прикладная лингвистика, язык, состояние, деятельность, изменение.