ЛЕКЦІЇ
ВІДОМИХ УКРАЇНСЬКИХ ТА ЗАРУБІЖНИХ УЧЕНИХ

THE STUDY OF LANGUAGE: LINGUISTIC PARADIGMS

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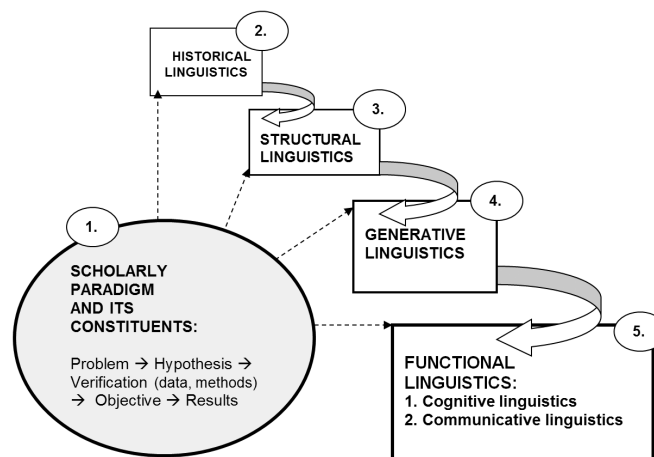Bohdan Khmelnistky National University of Cherkasy
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Plan

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Cognitive map

1. SCHOLARLY PARADIGM AND ITS CONSTITUENTS. CHANGE OF PARADIGMS

A scholarly paradigm is a system of views shared by many scholars within a certain period of time. The **constituents** of any scholarly paradigm are:

(a) *the problem*, or question;

(b) *the hypothesis*, or hypothetical answer to the posed question;

(c) *verification* of this hypothesis, which involves the particular *data* and methods applied in the analysis of these data;

(d) *the objective* pursued in the analysis and related to the hypothesis;

(e) the obtained *results*.

The change of a scholarly paradigm may be caused by change of the hypothesis or change of the problem. Change of the hypothesis that is not confirmed in the analysis of data entails disappearance of the scholarly paradigm which is substituted by a new one, grounded on a new hypothesis. For instance, in astronomy the paradigm grounded on the hypothesis about the Sun's rotating around the Earth was substituted by the paradigm grounded on the hypothesis about the Earth's rotating around the Sun. Change of the problem that causes emergence of a new scholarly paradigm does not lead to disappearance of the previous paradigm. Both continue to study the same object, but with a focus on its different aspects. It is change of the problem that resulted in emergence of different *linguistic paradigms*. Language is a multifaceted phenomenon, and linguistics, asking different questions about language, tries to expose these facets one by one. Among the major linguistic paradigms are: *Historical Linguistics* (formed in the 19th century), *Structural Linguistics* (formed in the first half of the 20th century), *Generative Linguistics* (formed in the second half of the 20th century), and *Functional Linguistics* (formed in the last decades of the 20th century) which is subdivided into *Cognitive Linguistics* and *Communicative Linguistics*. Further, these linguistic paradigms will be discussed with regard to the constituents of a scholarly paradigm in general

2. HISTORICAL LINGUISTICS

Problem
The question asked by linguists was: "Why do different languages have structural similarities?"
Hypothesis
It was hypothesized that the structural similarities of languages resulted from the existence of their common source, or ancestor.
Objective
The linguistic analysis had to reveal this hypothetical ancestor — a proto-language that gradually disintegrated into various kindred languages.
Data
The analyzed data were represented by languages whose similar forms and meanings suggest kinship.
Method
The method developed by historical linguistics is called the **historical-comparative method**. '*Historical*' means that each analyzed language is considered through history, back to its earlier stages that descend to the proto-language, i.e. languages are studied diachronically. '*Comparative*' means that languages are compared not only with one another, but also with their reconstructed ancestor.
Result
The historical studies of language resulted in:
(i) historical grammars of particular languages;

(ii) historical-comparative grammars of two or more kindred languages that stem from the same ancestor; e.g. Historical Comparative Grammar of Germanic Languages;
(iii) the genealogical classification of languages;
(iv) exposure of 'regular changes' in the historical development of languages. These changes were described by the German linguistic school called Young Grammarians.

At present the methods of historical linguistics, that were developed and tested in the study of Indo-European languages are being applied to the study of languages in other parts of the world. Besides, historical linguistics has advanced the hypothesis of 'super-families' — Nostratic (uniting several families of European, Asian, and African languages with presumed Dravidian roots), and China-Coucasian (integrating several families and isolated languages of Eurasia and North America, which presumed Iranian roots).

3. STRUCTURAL LINGUISTICS

Problem
The question posed by structural linguistics had been triggered by the works of Young Grammarians who said that the changes of language through history were regular, or systematic. This idea was further extended by the Swiss scholar Ferdinand de Saussure (1857–1913) who defined language as a system of signs where each item is related to the other items. Ferdinand de Saussure formulated several *linguistic antinomies* (the statements consisting of two contradicting parts each of which is true):
(a) language is synchrony and diachrony; i.e. language does not change at a particular interval of time, and language changes through long intervals of time;
(b) language is paradigmatics and syntagmatics; i.e. the units of language are related to one another in groups, or paradigms, which constituents have some common feature(s); the units of language are related to one another in syntagmas, or linear strings;
(c) language is a structure and a system; as a **structure**, language is represented by various types of (paradigmatic) links and (syntagmatic) relations between its elements, which themselves are *irrelevant*; as a **system**, language is represented by both its structure and its elements, which is this case are *relevant*: their nature is important for their structural links and relations. Therefore, SYSTEM = elements + their structure;
(d) language in its broad sense is both language (an abstract system of signs that exists in synchrony and diachrony) and speech (application of this system in actual interaction).

According to Ferdinand de Saussure, linguistics should focus on language as an abstract system of signs taken at a particular period of its development, or synchronically. So, the question that arises is: "What is the structure of language as an abstract system of signs?", or in other words, "How is language organized?"

Hypothesis

Finally, language was supposed to be a patterned system composed of interdependent elements rather than a collection of unconnected elements. The considerations as to the patterns of language were formulated within the three schools of structural linguistics: The Prague School, the Copenhagen School, and the American School of Descriptive Linguistics.

The Prague School considered the organization of language as grounded on the patterns of *forms, meanings, and functions* exposed both synchronically and diachronically.

The Copenhagen School focused on the a-temporal patterns of *forms and meanings* relevant for the organization of language at any stage of its development, i.e. irrespective of time.

The American School of Descriptive Linguistics (headed by Leonard Bloomfield) emphasized the necessity to concentrate on the patterns of linguistic *forms*, their types and relations that determine the organization of language in synchrony.

Objective

Linguists aimed to describe the systems of contemporary languages, to write grammars for unwritten languages (the languages of American Indians in particular), to develop the techniques of discovery procedure — a set of principles which would enable a linguist to uncover the linguistic units of both familiar and unfamiliar languages.

Data

The Prague School studied the systems of various European languages from the synchronic and diachronic standpoints. *The Copenhagen School* explored the system of human language in general, irrespective of its development through time. *The American School of Descriptive Linguistics* focused on the synchronic studies of English and the languages of American Indians.

Methods

All schools of structural linguistics contributed a lot to the development of linguistic methodologies. The analysis of linguistic forms employed (a) the method of distributional analysis, (b) the method of phonological and grammatical oppositions, (c) the method of immediate constituents, and (d) the transformational method. The analysis of linguistic meanings benefited from application of (a) the method of componential analysis used in lexical semantics, (b) the method of onomasiological analysis used in semantics of word-formation, (c) the theme-rheme structuring of a sentence, or identifying the information topic and comment in syntactic units. The Copenhagen School introduced formal logic into the analysis of linguistic meanings. The Prague School, concerned with the functioning of language, initiated the description of functional styles.

Results

Due to diverse contributions of structuralism, grammar obtained the theories of phonology, morphology, word-formation and syntax, while stylistics obtained the theory of functional styles. American scholars, Edward Sapier, in particular, advanced and developed the problem 'language and culture' which is being explored in contemporary anthropological linguistics.

4. GENERATIVE LINGUISTICS

Problem

The problem evolved out of the research done within the American School of Descriptive Linguistics. Having described phonology and morphology of language, it attempted to extend the same methodologies to the description of syntax. The failure of this attempt demonstrated the need to develop some other formal methods for the syntactic analysis. Such methods, introduced by Zellig Harris, aimed to provide an account of the grammatically correct utterances. This account, however, turned out to be endless. Besides, it included 'old', actual utterances that already existed in language, and it did not explain how new utterances emerge. Therefore, Harris' student **Noam Chomsky** in the 1950s suggested that a grammar should be more than a description of 'old' utterances; it should encompass possible future utterances. So, Chomsky shifted attention away from detailed description of actual utterances and started asking questions about the nature of the system that produces the output.

Hypothesis

According to Chomsky's hypothesis, *language has a special mechanism for generating an unlimited number of utterances out of a limited number of initial units*. Anyone who knows some language must have internalized (retained in the mind) a set of rules which specify the sequences permitted in this language, and prescribe the syntactic, or combinatory structures of all languages. A mental grammar which consists of a set of statements, or rules that specify which sequences of a language are possible, and which are impossible, is a *generative grammar*. Such grammar includes a finite number of rules, yet is capable of generating an infinite number of sentences from such rules due to their ability to refer back to each other repeatedly (known as recursion). Under a generative approach, human beings are assumed to be prewired for language, beginning life not with a blank slate but rather with a linguistic template or blueprint that they flesh out upon exposure to specific linguistic data.

Objective

The task of linguistics was to find out what rules specify creativity of language, and to describe language as an 'internalized' (mental) phenomenon.

Data

Since, for Chomsky, the inborn 'language faculty' is one and the same for all humans, and all languages have a common foundation, he maintained that the study of syntax of one language could be enough to shape an idea about the nature of language in general. Thus, the analyzed data were the syntactic structures of English.

Method

The syntactic structures were modeled with *tree diagrams* that demonstrated the nature of initial 'deep (internalized) structures' and their 'transformations', or possible changes, which were further reflected in 'surface (externalized) structures' of language. It should be noted that the initial methodologies developed by the generative paradigm in the 50s were later reconsidered by Chomsky himself, and not all of them are applied at present.

Result

The formal models used in syntactic analysis contributed to making linguistics a precise discipline bordering on formal logic. Such formal models were applicable in computer technologies thus bringing together linguistics and computer science. The question about the "internalized", or mental forms of language linked linguistics to psychology. Integration of linguistics and psychology resulted in the appearance of psycholinguistics (1951). In general, linguistics has become a major social science of direct relevance to psychologists, neurologists, anthropologists, philosophers and others.

Generative linguistics has undergone considerable changes since its birth in 1957 when Chomsky's book *Syntactic Structures* appeared.

In the 1960s, the emphasis was on the distinction between a deep structure, which conveyed the semantic properties of a sentence, and a surface structure, which supplied its pronunciation. In the 1970s, the emphasis shifted to finding the set of transformations used to derive the various syntactic patterns of each language. The list included transformations for passives, yes–no questions, and *wh*-questions ('*Which book did the student read?*'). While the number of sentences in a language is potentially infinite, it was assumed that the number of transformations could be reduced to a finite set. However, it soon became clear that there were many more transformations than it was possible to enumerate. Emphasis then shifted to narrowing down the transformations by type. Two general types were established: noun phrase (NP) movement, which moved a phrase within a sentence, as in passives, and *wh*-movement, which moved a phrase outside a sentence to a presentential landing site, as in *wh*-questions. Eventually, these two transformations were collapsed into one general transformation, 'move alpha', which allowed movement of any constituent anywhere, although with certain constraints.

In the 1980s, the model was flipped on its head. Rather than looking for the possible structures in a language, the emphasis instead shifted to determining the impossible structures. This represented a significant evolution in the conceptual model: whereas the number of patterns possible in a language is potentially infinite, the number of constraints is thought to be very small. In addition, it also made it possible to shift the emphasis to universal aspects of language, rather than simply to those properties that an individual language possessed. The grammar was now taken to consist not of a set of rules, but rather of a set of autonomous modules that interacted with each other. One conception of such a model became known as *government-and-binding theory (GB)*, named after two of the modules. The name refers to two central subtheories of the theory: *government*, which is an abstract syntactic relation applicable, among other things, to the assignment of case; and *binding*, which deals chiefly with the relationships between pronouns and the expressions with which they are co-referential. GB was the first theory to be based on the *principles and parameters model of language*, which also underlies the later developments of the *minimalist program*.

The overall conceptual model became known as the *principles-and-parameters model* since it considered language to consist of a set of wired-in principles that all languages shared, along with a set of parameters that they also shared, but whose values varied cross-linguistically and needed to be set upon exposure to language-particular data. The principles-and-parameters approach suggests that children are born with a *Universal Grammar (UG)*, which means they are (unconsciously) anticipating those features that are common to all languages (the principles), as well as limited options for those things that differ among languages (the parameters). Upon exposure to actual input from a given language, children are able to 'decide' which sort of language they have encountered. So, for example, some languages have basic subject–verb–object organization in which complements are attached to the right of the heads of phrases (thus objects follow verbs, relative clauses follow noun heads, and noun phrases follow prepositions), while other languages are subject–object–verb where the reverse order of complements is found. A child who is familiar with a language of the first type needs only to process a simple structure (that one with a verb followed by an object) and it will trigger the expectation that all the other head-complement structures will be in the same order. When all the open parameters have been set, the child possesses the 'core' grammar of the specific language he or she is exposed to. At the same time, however, the child has also been acquiring those aspects of the language that are not anticipated by UG, using experience-

dependent learning. These aspects are often together referred to as 'peripheral' grammar. Some researchers in this paradigm have assumed that all principles and parameters are operational or sensitive to the input from the beginning of life. Others have suggested that some may at least emerge with maturation.

In the 1990s, the emphasis turned to making the model even simpler conceptually. The new approach, called **minimalism**, assumed a much more limited role for the syntactic component. It now was seen as a computational device that simply checked that sentences were formed correctly. All morphology was assumed to be attached directly in the lexicon; the syntactic component then checked to see that features on the words matched. If so, the derivation was said to converge, otherwise, it crashed. Thus, the sentence *'The student enjoys the book'* would be acceptable since *'student'* and *'enjoys'* are both third-person singular, whereas '*The student enjoy the book*' would be ungrammatical as the number agreement on the noun and verb do not match. The formation of sentences was now assumed to occur by means of a few basic operations such as merge, used to generate basic declarative sentences, and move, used to derive patterns such as passives and questions.

Another conceptual model that developed during this decade was **optimality theory (OT)**, which suggests that the observed forms of language arise from the interaction between conflicting constraints, and variation among languages depends on different sets of universal constraints. OT differs from other approaches, which typically use rules rather than constraints.

While the conceptual details of the generative grammar model have changed greatly over half a century, the basic underlying tenet, that language is a species-specific property for which human beings come prewired, has remained constant. The present research conducted intensively throughout the world is believed to yield new insights into the specific shape of the grammar, while remaining true to the model's belief in a wired-in blueprint.

5. FUNCTIONAL LINGUISTICS

The paradigm is called 'functional' because it focuses on the most important functions of language — *cognitive* (language is used to signify concepts in the mind), and *communicative* (language is used for human interaction). Hence, the paradigm splits into cognitive linguistics and communicative linguistics.

COGNITIVE LINGUISTICS

Problem

Cognitive linguistics appeared at the end of the 1980s as an alternative to generative linguistics.

Generative linguistics maintains that language exists in its 'internalized' form in the mind. Therefore, one may ask HOW the mental 'program' that governs the language and its use relates to the general conceptual system intended for processing information about the experienced world.

Hypothesis

According to Chomsky, the internalized linguistic mechanism is an autonomous module that regulates creation of formal linguistic structures. This mechanism is just 'linked' to the conceptual system with its 'logical forms'. Cognitive linguistics, conversely, holds that the internalized linguistic mechanism is not autonomous. The linguistic forms are dependent on their meanings retained in the conceptual system, and the organization of language is similar (not identical) to the organization of our thought. In other words, the system of language is *iconic* to the system of our thought.

Objective

To explain the linguistic structures, one must understand what the structures of thought are like, and reveal the relation between the organization of language and organization of our general information system.

Data

The information system of the human mind is constituted by interrelated concepts represented in meanings of various linguistic units. Thus, in the focus of attention are *meanings* manifested by different linguistic units in a wide range of languages. These meanings are thoroughly analyzed and systematized. The results of this analysis are compared with the arrangement of 'externalized' linguistic expressions, or linguistic 'forms'.

Methods

Cognitive linguistics uses diverse techniques of *conceptual analysis*. Applied to linguistic meanings, they help to expose how information is structured in the human mind, and what cognitive operations are further applied to such structures. Conceptual analysis employs generalized (schematic) concepts and conceptual structures for arrangement and systematization of more specific concepts and conceptual structures.

Result

Young as cognitive linguistics is (the year of its 'birth' is considered to be 1989), it has already succeeded in revealing a number of conceptual structures and cognitive processes that underlie linguistic forms. Cognitive factors related to language and its use allow us to explain why the languages are made the way they are. The conceptual structures exposed in linguistic analysis have practical implications for developing new information technologies, particularly in teaching and computer programming.

COMMUNICATIVE LINGUISTICS

Problem

Communicative linguistics (dates back to the 1950s) returned to the analysis of 'speech' excluded from linguistics by Ferdinand de Saussure. This return was stimulated by generative linguistics. The latter, concerned with the problem of 'linguistic competence' (knowledge of language) and 'linguistic performance' (use of language in speech), enquired what a person must know to speak some language. It was obvious that along with the language *per se*, one must know how it is used. The use of language in human interaction is influenced by a number of factors. For communicative linguistics, these factors have become the central issue.

Hypothesis

It was hypothesized that

(a) the meaning of a linguistic unit is influenced by the text in which it is used;

(b) the text, or message, is influenced by the speaker, his/her communicative intention, his/her age, gender, societal status, educational and cultural background;

(c) the communicative intention of the speaker depends on the situation of speech.

Objective

Communicative linguistics aims to provide a comprehensible account of various factors that influence the use of language in communication.

Data

The analyzed data vary with regard to the research objectives. The data may be represented by (a) contextual meanings of various linguistic units, (b) speech acts, (c) texts, (d) discourses, where a text is considered against the background of the situation of speech and the characteristics of the speakers, and (e) discourse practices employed in mono-cultural and multi-cultural interaction.

Methods

Communicative linguistics applies the methods of contextual analysis, the methods of text and discourse analysis, the speech acts typology, the principles (maxims) of cooperation and politeness, and a number of other methodological devices relevant for particular data.

Result

Communicative Linguistics has created a multi-faceted theory of linguistic communication which considers such topics:

(i) intention of messages — theory of speech acts;

(ii) organization of messages — text linguistics;

(iii) interpretation of messages — theory of interpretation;

(iv) conveying messages / strategies of speech — general pragmatics;

(v) human factor in communication — sociopragmatics.

* * *

In contemporary linguistics, where all the above paradigms co-exist, there are no distinct borderlines in between them: one paradigm uses the findings of another paradigm to account for the phenomena which it studies. For example, the methods developed by structuralism are employed by cognitive linguistics at the first stages of data analysis, and historical linguistics employs the methods of cognitive linguistics after applying its own methods. Linguistic fields and linguistic paradigms converge with one another and with the non-linguistic disciplines. Such convergence, characterizing co-existence of contemporary linguistic paradigms, is compatible with what Michel Foucault calls **'an episteme'** a coherent integration of all links between sciences in a particular epoch, with such links being exposed in scholarly discourses. While a scholarly paradigm focuses on its 'internal' rules, an episteme is concerned with culturally and historically grounded orientations in cognizing the world. For contemporary linguistics as an episteme, this orientation is anthropocentricity: cognizing a man through language, and cognizing language through the studies of a man as its user — his biology, psychology, and sociology.

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