

ЛЕКЦІЇ ВІДОМИХ УКРАЇНСЬКИХ ТА ЗАРУБІЖНИХ УЧЕНИХ

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THE LINGUISTIC PHILOSOPHY OF NOAM CHOMSKY

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The paper offers a preliminary overview of the Chomskian revolution in linguistics, with special emphasis laid on his anthropological stance. The pivotal ideas of language faculty as a cognitive capacity of mind, language creativity that follows from the fundamentals of philosophical rationalism, generative procedure, as well as aims of to-date linguistic theory are highlighted.

Key words: Chomskian revolution, innateness hypothesis, language faculty, language creativity, generative procedure.

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Лінгвістична філософія Ноама Хомського

Лекція пропонує попередній огляд хомськіанської революції у мовознавстві з особливим акцентом на його антропологічній концепції. Висвітлено ключові ідеї мовної здібності людини як складової пізнавальної функції розуму, творчий аспект мовної діяльності, що випливає із засадничих основ філософського раціоналізму; генеративний процедурний апарат та місію сучасної лінгвістики в цілому.

Ключові слова: хомськіанська революція, гіпотеза вродженості мовних структур, мовна здібність людини, лінгвальна креативність, генеративний процедурний апарат.

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Fish swim, birds fly, people talk. The talents displayed by fish and birds rest on specific biological structures whose intricate detail is attributable to genetic endowment. Human linguistic capacity similarly rests on dedicated mental structures many of whose specific details are an innate biological endowment of the species. One of Chomsky's central concerns has been to press this analogy and uncover its implications for theories of mind, meaning and knowledge.

*Routledge Encyclopedia of Philosophy,
London, 1998*

1. Introduction.

Noam Chomsky, born Avram Noam Chomsky (1928–), is one of the most influential linguists of the twentieth century and still today. He is most famous for his unique linguistic philosophy.

He has revolutionized the discipline of linguistics with his much-talked-about theory of Transformational Generative Grammar (TGG), in which he emphasizes the mental capacity of generating sentences with the use of unconscious knowledge of language, which he calls

Universal Grammar (UG). He opposes the behaviorist psychology in favor of innatism for explaining the acquisition of language. He claims that it becomes possible for human child to learn a language due to the linguistic faculty with which the child is born, and that the use of language for an adult is mostly a mental exercise. His ideas brought about a revolution in linguistics, dubbed as Chomskyan Revolution. His philosophy holds a strong propensity to rationalism in search of a cognitive foundation. His theory is a continuation of analytic philosophy, which puts language in the center of philosophical investigation (Binoy Barman, 2012).

2. Chomskian revolution in linguistics

2.1. Chomsky's anthropological stance

Chomsky takes a *naturalistic or innate view of human nature*. He sees a *human being as a biological organism* like any other, except that it is endowed with a unique intellectual capacity to think and reason, and to express these thoughts and reasons (communication), and that these are *contingent upon freedom*. He believes these abilities are internally linked to our genetics just as our visual systems, muscular systems and all other biological systems. In one of his interviews (Osiatynski, 1984), Chomsky is more explicit ascertaining that a human being or any complex organism has a system of cognitive structures that develop much in the way the physical organs of the body develop. That is, in their fundamental character, they are innate; though their basic form is determined by the genetic structure of the organism, they grow under particular environmental conditions, assuming a specific form that admits of some variation.

To prove the *innateness hypothesis* Chomsky refers us to the language acquisition practice. According to Chomsky, children display “ordinary” creativity — appropriate and innovative use of complexes of concepts — from virtually their first words. With language, they bring to bear thousands of rich and articulate concepts when they play, invent, and speak to and understand each other. They seem to know much more than they have been taught — or even could be taught. Such knowledge, therefore, must be innate in some sense. To say it is innate, however, is not to say that the child is conscious of it or even that it exists, fully formed, at birth. It is only to say that it is produced by the child's system of concept generation and combination, in accordance with the system's courses of biological and physical development, upon their exposure to certain kinds of environmental input.

It has been observed, that children acquire concepts and language with amazing facility and speed, despite the complexity or even absence of meaningful evidence and instruction in their early years. The inference to the conclusion that much of what they acquire must

be innate is known as the argument from the “poverty of the stimulus” (anti-behaviorist approach — *I. B.*). Specifying precisely what children acquire and how they acquire it are aspects of what Chomsky called in *LSLT* the “fundamental problem” of linguistics. In later work he speaks of this as “Plato's problem,” a reference to Plato's attempt (in his dialogue the *Meno*) to explain how it is possible for an uneducated child to solve geometrical problems with appropriate prompting but without any specific training or background in mathematics. Unlike Plato, however, Chomsky holds that solving Plato's problem is a task for natural science, specifically cognitive science and linguistics.

2.2. Language is a unique human trait

Much of what is distinctive among human beings is a specific manner in which a variety of shared cognitive structures develops. Chomsky holds that language is the most intricate of these structures. In studying language, one can discover many basic properties of this cognitive structure, its organization, and the genetic predispositions that provide the foundation for its development. It proves to be a universal tool for discovering the most elaborate features of other cognitive systems.

As a declared Cartesian, Chomsky via *Cartesian Linguistics* (1966) clearly embraces the interpretation of Descartes' famous dictum ‘I think therefore I am’ (*cogito ergo sum*) as the solid foundation for knowledge. With this Cartesian spirit, Chomsky claims that language refers to certain mental states, which a linguistic theory will explicate. He says: “We should, so it appears, think of knowledge of language as a certain state of mind/brain, a relatively stable element in transitory mental states once it is attained; furthermore as a state of some distinguishable faculty of the mind — *the language faculty* — with its specific properties, structure and organization, one module of the mind” (Binoy Barman, 2012).

Following the Cartesian dichotomy, humans vs. animals with respect to language faculty, he postulates that humans are different from other creatures, whereas every human is identical in this respect. Chomsky postulates that there has to be a human universal, more precisely, a universal cognitive and behavioral capacity, equally shared by the Amazon hunter-gatherers and us, manifested in every culture and every level of personal achievement (Marion Long, 2011).

The latter is supported by *language creativity postulate*, which follows from a fundamental insight of philosophical rationalism. Each language in effect provides a means to construct and interpret infinitely many structured expressions, each of which has a semantic interpretation (LF) and an expression in sound (PF). Thus, there has to be what is called a *generative procedure*, an ability to generate infinite sentences or expressions and then to connect them to thought systems and to sensory motor systems.

One has to begin by focusing on this central property, the unbounded generation of structured expressions and their interpretations. Those ideas crystallized and became part of the so-called *biolinguistic framework*, which looks at language as an element of human biology, rather like, say, the visual system.

3. Linguistics mission

3.1. Preliminary considerations

Given these views, one has to conclude that the central object of study in theoretical linguistics is 'the language faculty', a postulated mental organ which is dedicated to acquiring linguistic knowledge and is involved in various aspects of language-use, including the production and understanding of utterances.

Hence, the aim of linguistic theory is to describe (i) the initial state of this faculty; and (ii) how it changes through exposure to linguistic data. Chomsky (1981) characterizes the initial state of the language faculty as a set of principles and parameters. Language acquisition consists in setting these open parameter values based on linguistic data available to a child. The initial state of the system is UG: a super-recipe for concocting language-specific grammars. Grammars constitute the knowledge of particular languages that result when parametric values are fixed (Norbert Horstein, 1998).

Linguistic theory, thus, has a double mission. First, it aims to 'adequately' characterize the grammars (and hence the mental states) attained by native speakers. Theories are 'descriptively adequate' if they attain this goal. In addition, linguistic theory aims to explain how grammatical competence is attained. Theories are 'explanatorily adequate' if they show how descriptively adequate grammars can arise on the basis of exposure to 'primary linguistic data' (PLD): the data children are exposed to and use in attaining their native grammars. Explanatory adequacy rests on an articulated theory of UG, and in particular a detailed theory of the general principles and open parameters that characterize the initial state of the language faculty (that is, the biologically endowed mental structures).

3.2. The aims and principles of linguistic theory

There is an intimate relation between how a problem is conceived and the kinds of explanations one should offer. Chomsky proposes that we identify explanation in linguistics with a solution to the problem of how children can attain mastery of their native languages based on a rather slender database. This is often referred to as 'the logical problem of language acquisition'. A natural language assigns meanings to an unbounded number of sentences. Humans typically come to master at least one such language in a surprisingly short time, without conscious effort, explicit instruction

or apparent difficulty. How is this possible? There are significant constraints on any acceptable answer.

First, a human can acquire any language if placed in the appropriate speech community. Grow up in Boston and one grows up speaking English the way Bostonians do. However, PLD available to the child are unable to guide the task unaided. There are four kinds of problems with the data that prevent it from shaping the outcome:

(a) The set of sentences the child is exposed to is finite. However, the knowledge attained extends over an unbounded domain of sentences.

(b) The child is exposed not to sentences but to utterances of sentences. These are imperfect vehicles for the transmission of sentential information as they can be defective in various ways. Slurred speech, half sentences, slips of the tongue and mispronunciations are only a few of the ways that utterances can obscure sentence structure.

(c) Acquisition takes place without explicit guidance by the speech community. This is so for a variety of reasons. Children do not make many errors to begin with when one considers the range of logically possible mistakes. Moreover, adults do not engage in systematic corrections of errors that do occur and even when correction is offered children seem neither to notice nor to care. At any rate, children seem surprisingly immune to any form of adult linguistic intrusion (Lightfoot, 1982).

(d) Last of all, and most importantly, of the linguistic evidence theoretically available to the child, it is likely that only simple sentences are absorbed. The gap between input and intake is attributable to various cognitive limitations such as short attention span and limited memory. This implies that the acquisition process is primarily guided by the information available in well-formed simple sentences. Negative data (the information available in unacceptable ill-formed sentences) and complex data (the information yielded by complex constructions) are not among the PLD that guide the process of grammar acquisition. The child constructing its native grammar is limited to an informationally restricted subset of the relevant data. In contrast to the evidence that the linguist exploits in theory construction, the information the child uses in building its grammar is severely restricted. This suggests that whenever the linguistic properties of complex clauses diverge from simple ones, the acquisition of this knowledge cannot be driven by data. Induction is insufficient as the relevant information is simply unavailable in the PLD.

The general picture that emerges from these considerations is that attaining linguistic competence involves the acquisition of a grammar, and that humans come equipped with a rich innate system that guides the process of grammar construction. This system is supple enough to allow for the acquisition of any natural language grammar, yet rigid enough to guide

the process despite the degeneracy and deficiency of the PLD. Linguistic theorizing takes the above facts as boundary conditions and aims both at descriptive adequacy (that is, to characterize the knowledge that speakers have of their native grammars) and explanatory adequacy (that is, to adumbrate the fine structure of the innate capacity).

Issues of descriptive and explanatory adequacy have loomed large in Chomsky's work since the beginning. His argument in favour of a transformational approach to grammar rested on the claim that it allowed for the statement of crucial generalizations evident in the judgments of native speakers and so advanced the goal of descriptive adequacy (Chomsky, 1957). Similarly, his influential critique (1959) of Skinner's Verbal Behavior consisted in showing that the learning theory presented therein was explanatorily inadequate. It was either too vague to be of scientific value or clearly incorrect given even moderately precise notions of stimulus or reinforcement.

The general conclusion Chomsky draws is that whatever problems linguistic theory encounters, it is no more methodologically problematic than theories in other domains. He attributes the qualms

of philosophers to lingering empiricist dogma or an indefensible epistemological dualism.

4. Conclusion

Chomsky's input in philosophy highly ranks among analytic philosophers due to three factors (Binoy Barman). First, Chomsky contributed substantially to a major methodological shift in the human sciences, turning away from the prevailing empiricism of the mid-twentieth century: behaviourism in psychology, structuralism in linguistics and positivism in philosophy. Second, his groundbreaking book *Aspects of the Theory of Syntax* (1965) laid a conceptual foundation for a new cognitivist approach to linguistics and provided philosophers with a new framework for exploring human language and mind. Finally, he has persistently defended his views, engaging in important debates with the major figures in analytic and critical philosophy including Tyler Burge, Donald Davidson, Michael Dummett, Saul Kripke, Thomas Nagel, Hilary Putnam, Willard Van Orman Quine, John Searle, Jacques Derrida, Michel Foucault and Julia Kristeva throughout his career.

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