

(A brief introduction)

methodology /ˌmeθəˈdɔləʤɪ/

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Research is "creative and systematic work undertaken to increase the stock of knowledge, including knowledge of humans, culture and society, and the use of this stock of knowledge to devise new applications."



Methodology [ˌmεθəˈdɒlədʒɪ] , -gies is
1) the system of methods and principles used in a particular discipline, in some particular

area of study or activity.

2) the branch of philosophy concerned with the science of method and procedure.



Method /'meθəd/
is a particular procedure for accomplishing or approaching something, especially a systematic or established one.

via Latin from Greek methodos 'pursuit of knowledge', from meta-(expressing development) + hodos 'way'

WHAT IS METHOD LIKE?

Distributive Analysis is a method of linguistic research in which the classification of linguistic units and the study of their features are carried out on the basis of the distribution of the units in question in the spoken chain—that is, on the basis of their combinability with other units, which are called the environment, or context, of the units in question. Distributive analysis was devised by representatives of so-called descriptive linguistics.

The Great Soviet Encyclopedia, 3rd Edition (1970-1979). © 2010 The Gale Group, Inc. All rights reserved.



The **distribution** of a unit is the sum total of all its environments.

The environment of a unit may be either "right" or "left".

There are three main types of distribution:

- 1) contrastive;
- 2) non-contrastive;
- 3) complementary.



The **distributional analysis** is used to fix and study the units of language in relation to their contextual environments, i. e. adjoining elements in the text. The study is conducted in **two stages**.

At the first stage, the analyzed text is divided into recurrent segments consisting of phonemes. These segments are called "morphs".

At the second stage, the environmental features of the morphs are established and the corresponding **identifications** are effected.



Contrastive and non-contrastive distribution concern identical environments of different morphs.

The morphs are said to be **in contrastive distribution** if their meanings are different.

Such morphs constitute *different morphemes* (eg. play-ed, play-ing).



Contrastive and non-contrastive distribution concern identical environments of different morphs.

The morphs are said to be in **noncontrastive distribution** *if their meaning is the same*.

Such morphs constitute "free alternants", or "free variants" of the same morpheme (eg. burn-ed, burn-t).

/ 'veə.i.ent /; /ɔːlˈtɜːnənt/;/ˌɔːltəˈneɪʃ(ə)n/



Complementary distribution concerns different environments of formally different morphs which are united by the same meaning.

If two or more morphs have the same meaning and the difference in their form is explained by different environments, these morphs are said to be in complementary distribution and considered the allomorphs of the same morpheme (eg. Desks /-s/, girls /-z/, glasses /-iz/).

What is method description like?

Method application restrictions

The Distributional Analysis is a good example of finding relevant interrelation between linguistic *syntagmatic* and *paradigmatic structures*, such as meaning and word structure. The transfer of distribution analysis to other levels or areas of linguistic text processing may be a bit problematic, since real life texts admit (or incur) **amphibolic** [ˌæm(p)fɪ'bɔlɪk] **expressions** like 'fat major's wife' which may mean both that major is fat or his wife is.



Research [rɪˈsɜːtʃ] is a systematic investigation to establish facts or principles (or to collect information on a subject).

Syn: investigation, experimentation, testing, analysis, fact-finding, fieldwork, examination, scrutiny etc.

To research – исследовать. to carry out investigations into (a subject, problem, etc.) Syn: investigate, study, enquire into, look into, probe, explore, analyse, examine, scrutinize etc.

WHAT IS RESEARCH?

The TASK
Write down ten synonyms of the English
verb 'to research'

WHAT KIND OF RESEARCH?

research work	— научно-исследовательская
	работа (НИР)
independent / original	— независимое, оригинальное
research	исследование
detailed / thorough	— детальное, обстоятельное
research	исследование
laborious / painstaking	— трудоёмкое, напряжённое
research	исследование
solid research	— серьёзное, глубокое
	исследование
applied research	— прикладное исследование

Check yourself!

WHAT KIND OF RESEARCH?

1)	— научно-исследовательская работа (НИР)
	— независимое, оригинальное
	исследование
	— детальное, обстоятельное
	исследование
	— трудоёмкое, напряжённое
	исследование
	— серьёзное, глубокое
	исследование
	— прикладное исследование



to be engaged in research	— заниматься научно- исследовательской работой
to conduct / do / pursue research	 проводить исследования
to carry out a research into the causes of cancer	исследовать причины заболевания раком
His researches have been fruitful.	— Его исследования принесли плоды.

Check yourself!

WHAT KIND OF RESEARCH?

— заниматься научно- исследовательской работой
проводить исследования
– исследовать причины
— Его исследования принесли плоды.

ENGLISH RESEARCH COLLOCATIONS

English academic research collocations. Check yourself!



ENGLISH RESEARCH COLLOCATIONS

English academic research collocations. Check yourself!





English academic research collocations. Check yourself!



https://learningapps.org/display?v=ps26asabt17



English academic research collocations. Check yourself!



https://learningapps.org/display?v=pytqve0sa17



English academic research collocations. Check yourself!



https://learningapps.org/display?v=ps6as3oo517



Methodology [ˌmεθəˈdɒlədʒɪ] (derived from *method* and *logic*)

is the study of structure, logical organization, methods and means of activity;

The methodology of science is the doctrine of the principles of construction, forms and methods of scientific knowledge.

Methodology [ˌmεθəˈdɒlədʒɪ] is the doctrine of the structure, logical organization, methods and means of activity. So Methodology at large forms a necessary component of any activity as the latter becomes the subject of awareness, learning and rationalization.

METHODOLOGY and ACTIVITY Methodological knowledge acts in the form of both prescriptions and norms, which fix the content and sequence of certain activities (normative M.), and **descriptions** of actually performed activities (descriptive M.). In both cases, the main function of this knowledge is the internal organization and regulation of the process of cognition or practical transformation of an object.

In modern scientific and methodological discourse, M. is interpreted primarily as M. of scientific knowledge (or research), that is, the doctrine concerning the principles of construction, as well as forms and methods of scientific and cognitive activity.

Methodology of science gives a description of the components of a research study — its **object**, **subject** of analysis, research task (or problem), research tools required to solve a given type of problem, and also forms an idea of the sequence of the researcher's progress in the task-solving process.

The most important points of application of M. are the problem statement (this is where the most frequent methodological errors occur, leading to the advancement of pseudo-problems or significantly complicating the receipt of the result),

... the construction of the subject of research and the construction of a scientific theory, as well as verification of the results obtained in terms of its truth, i. e. conformity to the object of study.

Modern philosophical and methodological studies revealed some important mechanisms for the functioning and development of scientific research and knowledge:



- laws of succession of the change of scientific theories (the correspondence principle);
- the presence of a "paradigm" of thinking specific to each era of the development of science (i.e., a set of implicitly defined regulative principles);
- methodological features of artificial languages used in science;



- **specifics** of various types of scientific explanation;
- methods of building scientific theories (deductive, hypothetical-deductive, genetic, etc.),
- characteristics of a number of methodological areas of modern cognition (systems approach, structuralism, cybernetic methods, principles of probabilistic thinking etc.).



Since the 1950s. in M. science, problems of generating and **changing knowledge systems** begin to occupy a prominent place. The Austrian-born British logician [lɔˈʤɪʃ(ə)n] and philosopher K. Sir Karl Popper, (1902-94) tries to explain this process on the basis of the principle of falsification put forward by him, that is, the systematic refutation of existing theories.



American investigator of history of science Thomas Samuel Kuhn /kuːn/(1922 –1996) formulates the concept of the development of science through **scientific revolutions**, leading to a radical **change of paradigms** of scientific thinking.

See: Structure of Scientific Revolutions.pdf

(Beware! Circa ['s3:kə] 210 pp.!)

English (I say 'Hungarian') mathematician and philosopher Imre Lakatos [UK: /ˈlækətɒs/, US: /-toʊs/; [ˈlɒkɒtoʃ ˈimrɛ] (1922 –1974) proposed the idea of the development of science based on the foregrounding, advancement [ədˈvɑːn(t)smənt] and implementation of a certain sequence of research programs.

METHODOLOGY and ACTIVITY

An important aspect of these and other studies is the broad criticism of the **neopositivis**t ideas about M. science and its subject matter for the narrowness of their initial premises ['premisiz]. In this regard, in the works of some Soviet as well as modern Russian and foreign researchers, M.'s concept is developed, based on the **Principle of Acti**vity. The latter one presents M. as a systematic theory of research activity.

METHODOLOGY and ACTIVITY

The development of this concept is accompanied by a criticism of Popper's falsificationism (for one-sided presentation of the process of knowledge development) and Kuhn's concept of SR (for his denial of continuity in the development of knowledge).

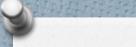


The special-scientific M., in turn, is divided into several levels:

(1) general scientific methodological concept and direction and (2) M. of individual sciences, methods and techniques of research. Starting from the 2nd half of the 20th century, the first of these levels (which is far from homogeneous in content) has undergone especially rapid development.

METHODOLOGY and ACTIVITY

The reasons for its emergence and growth are the universalization of means of knowledge, facilitated by this generalized formulation of scientific problems, as well as the desire for synthesis, which becomes dominant in the thinking style of modern science.





vowel ['vauəl] /

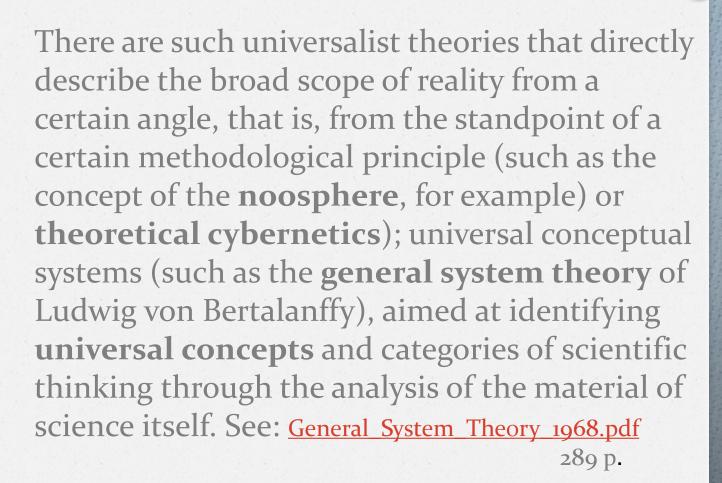
consonant ['kon(t)s(\text{\tin}\text{\te}\tint{\texi}\text{\text{\text{\text{\text{\texictex{\texicter{\text{\texi}\tin\text{\texit{\text{\text{\texi}\text{\texit{\text{\text{\text{

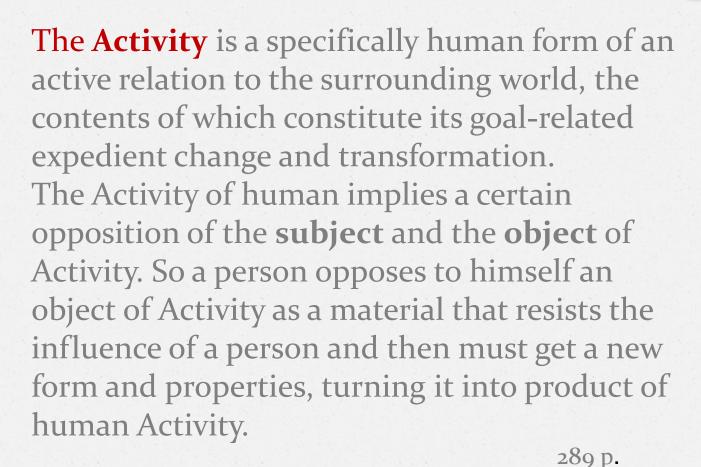
Kinds of Language Universals

AN ABSOLUTE UNIVE	RSAL A STATISTICAL UNIVERSAL
ABSOLUTE UNIVER refer to properties all languages	
All languages have and consonants.	vowels Subjects tend strongly to precede objects.

Kinds of Language Universals

A Language Universal Type	An example
AN IMPLICATIONAL UNIVERSAL	If a language has voiced fricatives, it also has unvoiced fricatives, but not necessarily the other way round.
AN NON- IMPLICATIONAL UNIVERSAL	Present or absent in natural languages without reference to any other properties of the given language.







- (a) the goal,
- (b) the means,
- (c) the result
- (d) and the process of Activity itself, and, therefore, an integral characteristic of Activity is its (e) awareness on part of its subject.

Activity is the real driving force of social progress and the condition of the very existence of society.

As a philosophical principle, the concept of Activity was established within German classical philosophy, when a new concept of personality triumphed in European culture, characterized by rationality, diverse areas of activity and initiative, and the prerequisites were created for considering Activity as the basis and principle of all culture.

English Activity

Activity	activities
Activity	occupation
Activity	job
Activity	action, actions
Activity	agency
Activity	business
Activity	career
Activity	energies
Activity	function
Activity	movement
Activity	play



- 1) a suggested explanation for a group of facts or phenomena, either accepted as a basis for further verification (*working hypothesis*) or *accepted* as likely to be true /in theory/.
- 2) an assumption used in an argument without its being endorsed; a supposition.
- 3) an unproved theory; a conjecture.
- Etymology: from Greek, from hupotithenai to propose, suppose, literally: put under.

• A hypothesis is a proposition made as a basis for reasoning, without any assumption of its truth.

• A hypothesis is an unproved theory; a conjecture [kənˈdʒekʧə].

• A hypothesis is an assumption used in an argument without its being endorsed; a supposition.

• A hypothesis is a suggested explanation for a group of facts or phenomena, either accepted as a basis for further verification (working hypothesis) or accepted as likely to be true /i.e. a theory/.

• A hypothesis is an idea which is suggested as a possible explanation for a particular situation or condition, but which has not yet been proved to be correct.

• A hypothesis is a supposition or proposed explanation made on the basis of limited evidence as a <u>starting</u> point for further investigation.

WHAT IS NULL HYPOTHESIS?

• The null hypothesis is assumed to be true unless the test suggests otherwise, in which case it is rejected in favour of the alternative [5:1't3:n5tiv] hypothesis.

WHAT IS NULL HYPOTHESIS?

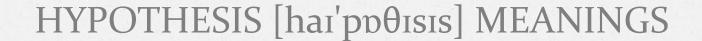
• The null hypothesis is the residual [rɪˈzɪdjuəl] hypothesis if the alternative [ɔːlˈtɜːnətɪv] hypothesis tested against it fails to achieve a predetermined significance level.

HYPOTHESIS [hai'ppθisis] MEANINGS

under the hypothesis of a theorem ...

= по условию теоремы ...

[haɪ'ppθɪsɪs] late 16th cent.: via late Latin from Greek hypothesis 'foundation,' from hypo 'under' + thesis 'placing.'



testable hypothesis

= проверяемая гипотеза ... (maths)

[haɪ'ppθɪsɪs] late 16th cent.: via late Latin from Greek hypothesis 'foundation,' from hypo 'under' + thesis 'placing.'



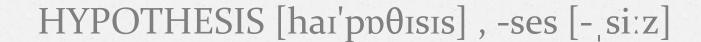
tested hypothesis

= проверяемая гипотеза ... (стат.)

[haɪ'ppθɪsɪs] late 16th cent.: via late Latin from Greek hypothesis 'foundation,' from hypo 'under' + thesis 'placing.'

HYPOTHESIS [hai'pv θ isis], -ses [- sizz]







— Они исходили
из
предположения,
что припасы
прибудут вовремя.





— У неё была теория, что если будешь пить молоко, то <u>не</u> простудишься.

WHAT CAN YOU DO WITH HYPOTHESIS?

1) to accept hypothesis	— принять гипотезу
2) to advance a hypothesis (that)	– выдвигать гипотезу (, согласно
	которой)
3) to confirm a hypothesis	— подтверждать гипотезу
4) to formulate a hypothesis	– выдвигать / формулировать
	гипотезу
5) to propose a hypothesis	выдвигать / предлагать гипотезу
6) to put forward a scientific	— выдвигать научную гипотезу
hypothesis	
7) to make a hypothesis	 – строить / выдвигать гипотезу
8) to form a hypothesis	– строить / выдвигать гипотезу
9) to frame a hypothesis	– строить / представлять гипотезу

Check yourself! WHAT CAN YOU DO WITH HYPOTHESIS?

— принять гипотезу
 выдвигать гипотезу (, согласно
которой)
— подтверждать гипотезу
– выдвигать / формулировать
гипотезу
 выдвигать / предлагать гипотезу
 выдвигать научную гипотезу
— строить / выдвигать гипотезу
— строить / выдвигать гипотезу
– строить / представлять гипотезу

WHAT CAN YOU DO WITH HYPOTHESIS?

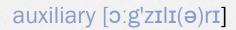
to test a hypothesis with	– проверять гипотезу на
experiment	опыте
to test a statistical hypothesis	проверять статистическую
	гипотезу
to reject a hypothesis	— отвергать гипотезу
to refine a hypothesis	— уточнить гипотезу
to refute a contention /	— опровергать заявление /
statement or assumption	утверждение / допущение
	(т.е. гипотезу)

The working hypothesis is tested and refined through discussion.

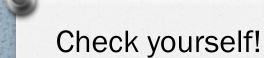


– проверять гипотезу на
опыте
 проверять статистическую
гипотезу
— отвергать гипотезу
— уточнить гипотезу
— опровергать заявление /
утверждение / допущение
(т.е. гипотезу)

Рабочая гипотеза проверяется и уточняется на основе обсуждения.



1. null hypothesis	— начальная гипотеза
2. ad hoc hypothesis	— гипотеза для данного случая
3. working hypothesis	— рабочая гипотеза
4. accepted hypothesis	— принятая гипотеза
5. acceptable hypothesis	— допустимая /приемлемая
	гипотеза
6. admissible hypothesis	— допустимая /приемлемая
	гипотеза
7. auxiliary hypothesis	— вспомогательная гипотеза
8. coarse [kɔːs] hypothesis	— приближённая гипотеза



auxiliary [ɔːgˈzɪlɪ(ə)rɪ]

— начальная гипотеза
— гипотеза для данного случая
— рабочая гипотеза
— принятая гипотеза
— допустимая /приемлемая
гипотеза
— допустимая /приемлемая
гипотеза
— вспомогательная гипотеза
— приближённая гипотеза



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9. complementary hypothesis	— дополнительная гипотеза
10. composite hypothesis	— сложная гипотеза, составная
	гипотеза
11. confirmable hypothesis	— подтверждаемая гипотеза
12. confirmed hypothesis	— подтвержданная гипотеза
13. false hypothesis	— ложная гипотеза / неверная
	гипотеза
14. implicit hypothesis	— неявная / подразумеваемая
	гипотеза
15. rejected hypothesis	— отвергнутая [отклонённая] гипотеза
16. research hypothesis	— альтернативная гипотеза

Check yourself!

— дополнительная гипотеза
— сложная гипотеза, составная
гипотеза
— подтверждаемая гипотеза
— подтвержданная гипотеза
— ложная гипотеза / неверная
гипотеза
— неявная / подразумеваемая
гипотеза
— отвергнутая [отклонённая] гипотеза
— альтернативная гипотеза



8

17. alternative [ɔːlˈtɜːnətɪv] H	— альтернативная гипотеза
18. one-sided alternative H	— односторонняя
	альтернативная гипотеза
19. the residual [rɪˈzɪdjuəl]	— остаточная гипотеза
hypothesis	
20. single / simple hypothesis	— простая гипотеза
21. statistical hypothesis	— статистическая гипотеза
22.two-sided alternative	— двусторонняя альтернативная
hypothesis	гипотеза
23. true hypothesis	— истинная / верная гипотеза
24.hypothesis under test	— проверяемая гипотеза





Check yourself!

— альтернативная гипотеза
— односторонняя
альтернативная гипотеза
— остаточная гипотеза
— простая гипотеза
— статистическая гипотеза
— двусторонняя альтернативная
гипотеза
— истинная / верная гипотеза
— проверяемая гипотеза

Theory [' θ 1 θ 1 θ 1 θ 1] is an idea used to account for a situation or justify a course of action.

Theory ['θιǝrι] is an ideal or hypothetical situation (esp in the phrase in theory).

Theory ['θιǝrι] is abstract knowledge or reasoning.

Theory ['θι**∍r**ι] **is** a speculative or conjectural view or idea.

Theory ['θιǝrι] is a set of principles on which the practice of an activity is based.

Theory ['01071] is a supposition or a system of ideas intended to explain something, especially one based on general principles independent of the thing to be explained.

Theory ['θιθτι] is a system of rules, procedures, and assumptions used to produce a result.

Theory ['θιǝrι] is a set of hypotheses related by logical or mathematical arguments to explain and predict a wide variety of connected phenomena in general terms.

IN THEORY

- 'in theory' in colloquial English is used in describing what is supposed to happen or be possible, usually with the implication that it does not in fact happen.
- If you have a theory about something, you have your own opinion about it which you cannot prove but which you think is true.
- There was a theory that he wanted to marry her...

IN THEORY

- o 'in theory' in colloquial English is used in describing what is supposed to happen or be possible, usually with the implication that it does not in fact happen.
- in practice, they may well become a lot worse.
 □



Theory ['Oɪərɪ] is an idea used to account for a situation or justify a course of action.

It is a nontechnical name for *hypothesis*.

Syn: hypothesis, thesis, conjecture, supposition, speculation, postulation, postulate, proposition, premise, surmise [səˈmaɪz], assumption, presupposition; opinion, view, belief, contention. My theory would be that the place has been seriously mismanaged... I have a theory about that.

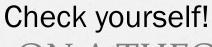
Check yourself!

WHAT IS THEORY ['θιərι]?

The TASK
Write down at least ten synonyms of the
English word 'theory'

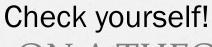


theory evolves	 теория возникает, появляется
to formulate a theory	— формулировать теорию
to develop a theory	– развивать теорию
to advance / present / propose /	предлагать теорию
suggest a theory	
to advocate theory	– отстаивать теорию
to combine theory and practice	 объединять теорию и практику
to test a theory	— проверять теорию
to confirm a theory	подтверждать теорию
theory holds up	теория подтверждается
to disprove / explode / refute a	— опровергать, подрывать,
theory	разбивать теорию



ON A THEORY - СОГЛАСНО ТЕОРИИ

theory evolves	— теория возникает, появляется
to formulate a theory	 формулировать теорию
to develop a theory	 развивать теорию
	предлагать теорию (4)
	– отстаивать теорию
to combine theory and practice	 объединять теорию и практику
to test a theory	— проверять теорию
to confirm a theory	— подтверждать теорию
	 теория подтверждается
	— опровергать, подрывать,
	разбивать теорию
	разопвать теорию



ON A THEORY - СОГЛАСНО ТЕОРИИ

theory evolves	 теория возникает, появляется
	 формулировать теорию
	— развивать теорию
	— предлагать теорию
	– отстаивать теорию
	 объединять теорию и практику
	— проверять теорию
	— подтверждать теорию
	теория подтверждается
	— опровергать, подрывать,
	разбивать теорию

in theory	
in theory	
In theory their plan makes	— Теоретически их план не
sense.	лишен смысла.

in theory	in principle
in theory	

in theory	in principle
in theory	on paper
in theory	in the abstract
in theory	

in theory	in principle
in theory	on paper
in theory	in the abstract
in theory	all things being equal
in theory	

in theory	in principle
in theory	on paper
in theory	in the abstract
in theory	all things being equal
in theory	in an ideal world
in theory	
in theory	
in theory	

in theory	in principle
in theory	on paper
in theory	in the abstract
in theory	all things being equal
in theory	in an ideal world
in theory	hypothetically
in theory	
in theory	

in theory	in principle
in theory	on paper
in theory	in the abstract
in theory	all things being equal
in theory	in an ideal world
in theory	hypothetically
in theory	theoretically [θιəˈretɪk(ə)lɪ]
in theory	

in theory	in principle
in theory	on paper
in theory	in the abstract
in theory	all things being equal
in theory	in an ideal world
in theory	hypothetically
in theory	theoretically
in theory	supposedly [sə'pəuzɪdlɪ]

in theory	in principle		
in theory	on paper		
in theory	in the abstract		
in theory	all things being equal		
in theory	in an ideal world		
in theory	hypothetically		
in theory	theoretically		
in theory	supposedly		
In theory, your idea sounds great, but can it be practically			
applied?			

Got tired? Check Yourself!

Ferdinand de Saussure admitted that a linguistic sign consists of

		yes	no
a)	Expression and content		
a)	Form and substance		
a)	Denotation and reference		
a)	A Signifier and signified		
a)	Denotation and connotation		
a)	Expression and meaning		
a)	Action and interpretation		
a)	Production and reception		
a)	Form and sound		
a)	Content and form		

Got tired? Check Yourself!

Ferdinand de Saussure stated that ... YES NO a) Linguistics is part of semiotics. b) Linguistics is part of semiology. c) Semiology is part of linguistics. d) Linguistics and semiology overlap.

Thanks for your attention!

Please, don't forget to get ready with your home task!