

DOI: <https://doi.org/10.18524/2307-4558.2025.44.343846>

UDC 81-1:37.091.3

DOMBROVAN Tetiana I.,

Grand PhD (Linguistics), Full Professor, Department of English Philology and Translation Studies, Odesa Polytechnic National University, 1 Shevchenko Avenue, Odesa, Ukraine;
e-mail: dombrovanti@gmail.com
<https://orcid.org/0000-0003-3119-5499>

FORMANOVA Svitlana V.,

Grand PhD (Linguistics), Full Professor, Department of Foreign Languages and Translation, Odesa National Maritime University, 34 Mechnikov Street, Odesa, Ukraine;
e-mail: svetlanafomanova@gmail.com
<https://orcid.org/0000-0001-9434-1903>

BOSA Tetiana S.,

Senior Lecturer, Department of Language Training and International Communication, Odesa State Academy of Civil Engineering and Architecture, 4 Didrikhson Street, Odesa, Ukraine;
e-mail: tatabosaya2007@gmail.com
<https://orcid.org/0000-0002-0806-6528>

SEEKING NEW WAYS OF STUDENTS' PROFESSIONAL DEVELOPMENT: AN INNOVATIVE APPROACH TO TEACHING THE HISTORY OF THE ENGLISH LANGUAGE AT UNIVERSITY

Summary: This article is focused on the use of an innovative method of teaching the history of the English language to university students. It links studies of language history with synergetics as a new multidisciplinary research program. The article provides an introduction to some basic concepts of linguistic synergetics as a novel approach to language studies. A special emphasis is laid upon the definition of a synergetic system. A synergetic approach to language studies, i.e. diachronic linguosynergetics, focuses on principles and mechanisms of language change and development and employs the methodological integrity of philosophy, linguistics and synergetics. The **object** of this research is the English language in its diachronic dimension, particularly the historical evolution of its phonetic, morphological, lexical, and syntactic subsystems. The study focuses on the processes of change and transformation within the language system, viewed through the lens of synergetics as a science of self-organization and complexity. The **subject** of this paper is the application of synergetic methodology to the study and teaching of the history of the English language. More specifically, the study emphasizes diachronic linguosynergetics as an interdisciplinary approach that combines linguistics, philosophy, and synergetics to explain the mechanisms of language change. The **purpose** of this article determined the solution of the following tasks: to substantiate the idea that the English language, like other natural languages, is a complex self-organizing system; to demonstrate that the methodology of synergetics can effectively explain the mechanisms of linguistic evolution; to show how the implementation of synergetic principles in teaching the history of English can facilitate deeper comprehension, critical thinking, and professional competence of future philologists.

From the perspective of the proposed approach, human language is considered an open, dynamic, non-linear, self-organizing system with all its hierarchical subsystems and elements coherently interconnected and controlled by governing parameters. Knowledge of mechanisms and principles of language change can help to foresee the variety of potential states of the analyzed complex system and to anticipate the behavior of the latter in the future. It is argued that linguistic synergetics is capable of addressing a broad range of issues concerning language change. It sheds new light on language development and permits better descriptions of phase transitions, or reconfigurations, of language as a synergetic megasystem. The article also contains **results** of the experiment that was conducted in Odesa Mechnikov National University (the English department of the faculty of Romance-and-Germanic philology). The study involved 96 third-year students who were divided into two groups: an experimental group (48 students) and control group (48 students). Students of the experimental group were involved into the experiment with implementing the principles of synergetics and the students of the control group continued studying in their usual way. The research results have shown the effectiveness of synergetics-based method of teaching the history of the English language to develop the students' professional competence.

Keywords: linguistic synergetics, language development, synergetic system, the English language, the history of the English language.

Introduction. The history of the English language is considered by students majoring in English linguistics as one of the most difficult university courses. To be more precise, the development of the phonetic system and the changes in morphology of word-classes (verbs, nouns, etc.) are ranked among the most difficult items for comprehension. Problematic is also the mechanism of the typological shift of English (from the synthetic type of organization to analytical) during the Middle period.

However, nobody will doubt the paramount importance of this subject, for it demonstrates diverse tendencies in the historical development of the language and helps to understand current changes within the language system. Moreover, knowledge of mechanisms of language changes may help to foresee possible ways of development of a language system in future. The successful teaching of the history of the English language to senior students majoring in English philology

will definitely contribute to their professional development. To become a professional linguist, the student should possess a profound knowledge of the history of a language (s)he studies.

The history of the English language is a course intended for undergraduates. Its aim is to acquaint future philologists and teachers of English with theoretical problems of language evolution and change in general and of English in particular, as well as to help them develop skills at implementing the obtained theoretical knowledge into practical teaching of modern English grammar, vocabulary, spelling and pronunciation.

The history of the English language is rightly considered as a cultural subject within the view of all educated people, too. In the words of A. C. Baugh, «the history of English is a story of cultures in contact during the past 1,500 years» [7, p. 1]. This subject clearly demonstrates that the history of a language is indispensably connected with the history of the country/countries using this language as a means of communication.

The past decade has seen a great number of articles, books and encyclopedias on the English language development. On the whole, they establish principal changes of language units on the phonetic, lexical and/or syntactic levels. Many authors represent the history of English as a succession of changes that occurred in the language starting from 449 AD and until nowadays. However, little has been done to reveal the very mechanisms of language changes. To meet such a demand, we employ to language studies the methodology of synergetics as a science of self-organization of complex systems.

The term *synergetics* (from Greek *coherent action*) was coined by the German physicist Hermann Haken in the mid-1970s to name a science of complexity, dealing with principles of emergence, self-organization and self-regulation of complex systems of various ontology – either human-made (artificial) or natural (self-organized) [12].

Successful application of concepts and methods of the synergetic approach to the description of biological, physical, historic, social, and even economic phenomena has revealed similarity, if not universality, of principles of evolution of complex systems. As a result, synergetics has made it possible to launch a wide variety of interdisciplinary interrelationships, among them: mathematical physics, mathematical history, social government, neurosynergetics, meteorology, geodynamics, prognostics, to mention just a few. The new disciplines, in their turn, require specialists with a profound knowledge of complex systems methodology. Otherwise, as Cliff Hooker points out, people whose education does not include relevant competency in complex systems are excluded from science, policy and large scale business or find themselves increasingly dependent on those who have it [13, p. 6].

Nowadays, the necessity of integration of different sciences is obvious and most scholars agree that the future of science lies within interdisciplinary research of complex systems. As noted by Polyahin and co-authors in their monograph *Ontology-Driven Processing of Transdisciplinary Domain Knowledge* [3], modern scientific progress must be grounded in the interaction between various fields, aimed at forming a holistic scientific worldview. This interdisciplinary orientation enables researchers to transcend the boundaries of individual disciplines and to address global challenges through a holistic and synergistic approach.

Profound shifts are unfolding within the conceptual framework of humanity, as the emergence of a synergetic worldview – emphasizing evolution, nonlinearity, and holism – transforms how we think. As Snehiriov [5, p. 111 – 115] observed, “the formation of a nonlinear style of thinking does not mean the end of the old scientific paradigm ... rather, it involves a methodological synthesis within the modern worldview conducted through nonlinear understanding”. In this process, the old paradigm yields to a conceptual shift: from being to becoming, from stability and equilibrium to instability and nonlinear phase transitions, and from rigid order to the dynamic, transformative chaos that underlies innovative change in complex systems.

The **aim** of this article is to advance a new multidisciplinary research approach – diachronic linguosynergetics, focusing on principles and mechanisms of language change and development, and employing methodological integrity of philosophy, linguistics and synergetics. In what follows we are going to: 1) consider the notion of a complex system; 2) demonstrate that language is a synergetic system; 3) introduce the methodology of diachronic linguosynergetics as a new multidisciplinary research approach, and 4) share the results of the experiment showing that implementation of synergetic principles in the teaching process is promising and rewarding. The **object** of this research is the English language in its diachronic dimension, particularly the historical evolution of its phonetic, morphological, lexical, and syntactic subsystems. The study focuses on the processes of change and transformation within the language system, viewed through the lens of synergetics as a science of self-organization and complexity. The **subject** of this paper is the application of synergetic methodology to the study and teaching of the history of the English language. More specifically, the study emphasizes diachronic linguosynergetics as an

interdisciplinary approach that combines linguistics, philosophy, and synergetics to explain the mechanisms of language change. The **purpose** of this article determined the solution of the following tasks: to substantiate the idea that the English language, like other natural languages, is a complex self-organizing system; to demonstrate that the methodology of synergetics can effectively explain the mechanisms of linguistic evolution; to show how the implementation of synergetic principles in teaching the history of English can facilitate deeper comprehension, critical thinking, and professional competence of future philologists.

This paper is based on the idea that modern teaching the history of English should not be reduced to mere enumeration of linguistic changes and/or listing historical events that caused the latter. Description must be accompanied by explanation and reasoning. The teacher is not only to show the final result of a certain process – (s)he should also make the student *think* why and how such and such result has become possible. Synergetics is to supply the researcher with new methodological instruments and the conceptual network for studies of language change and development.

Literature analysis. The problem of language change and historical development has long been in the focus of linguistic studies. Classical works by A. C. Baugh and T. Cable [7] provide a comprehensive overview of the history of the English language, describing key phonological and grammatical changes. In addition, Otto Jespersen [14] emphasized the analytical tendencies of English and the shift from a synthetic to an analytical type. More recent studies, such as those by David Crystal [10], highlight the cultural and global dimensions of English language history.

Ukrainian scholars have also made a significant contribution to this field. T. I. Dombrovan [1; 2] proposed a synergetic model of English language development, which demonstrates how self-organization and nonlinear processes can be applied to linguistic evolution. O. O. Polyahin, M. V. Petrenko, S. V. Kryvyyi, M. O. Boiko, K. S. Malakhov [3] stress the necessity of ontology-driven and transdisciplinary approaches to knowledge processing, which directly correlates with the application of synergetics in linguistics. I. O. Snehiriov [5] emphasizes the role of nonlinear thinking and methodological synthesis in contemporary science, which resonates with the present study's interdisciplinary orientation.

Thus, the literature review shows that while the historical changes of English are well documented, the mechanisms of such changes through the perspective of synergetics are only beginning to be explored.

Materials and methods. The pedagogical experiment was used as an empirical method to achieve the goal of the research. It was carried out in Odesa Mechnikov National University for third-year students of the Romance-and-Germanic Philology majoring in English. The experiment was held in the academic year of 2017-2018, and then was repeated in the following year with other students. The study involved 96 third-year students who were divided into two groups: an experimental group (48 students) and control group (48 students). Key notions and principles of synergetics were implemented in the process of teaching the history of the English language to the students of the experimental group.

The interdisciplinary (synergetic) synthesis should be considered as the main methodological principle of the present research. The following methods were also used: comparison and quantitative analysis of linguistic facts, generalization and systematization of modern scientific resources on the issue of formation and development of language as a synergetic system.

Discussion. Implementation of principles and notions of synergetics calls for no changes in the university curriculum – it reshapes the method of presenting the information using synergetics-based activity during lectures. In order to achieve the required effect, the experiment was carried out in two stages.

STAGE ONE. The task of the first (preparatory) stage is to introduce principles and notions of synergetics to students in order to acquaint them with a new interdisciplinary research program.

When asked “Do you think that language is a complex system?” students always give an immediate affirmative answer. However, they are not as quick in defining the notion “complexity” which is one of the key notions in language study.

What, then, is to be understood by «complex systems»?

A naive assumption is based on a description of a complex system as the one having numerous components connected to each other. Clearly, this interpretation is insufficient for research purposes: «A modern definition is based on the concept of algebraic complexity» [11, p. 4], i.e. includes a sequence of data describing both the interconnected network and cooperativity of the system's elements and their complex behaviour.

In our explanation of the notion ‘complexity’ we follow Robert C. Bishop who considers it more informative to characterize complex systems *phenomenologically* and lists the following most important features in these characterizations: 1) *many-body systems*: some systems exhibit

complex behaviour with as few as three constituents, while others require large numbers of constituents; 2) *broken symmetry*: various kinds of symmetries, such as homogeneous arrangements in space, may exist before some parameter reaches a critical value, but not beyond; 3) *hierarchy*: there are levels or nested structures that may be distinguished, often requiring different descriptions at the different levels (e.g., large-scale motions in fluids vs. small-scale fluctuations); 4) *irreversibility*. Distinguishable hierarchies are usually indicators of or result from irreversible processes (e.g., diffusion, effusion); 5) *relations*: system constituents are coupled to each other via some kinds of relation, so are not mere aggregates like sand grain piles; 6) *situatedness*. The dynamics of the constituents usually depend upon the structures in which they are embedded as well as the environment and history of the system as a whole; 7) *intearity*: systems display an organic unity of function which is absent if one of the constituents or internal structures is absent or if relations among the structures and constituents are broken; 8) *intearation*: various forms of structural/functional relations, such as feedback loops couple the components contributing crucially to maintaining system integrity; 9) *intricate behaviour*. System behaviour lies somewhere between simple order and total disorder such that it is difficult to describe and does not merely exhibit randomly produced structures; 10) *stability*. The organization and relational unity of the system is preserved under small perturbations and adaptive under moderate changes in its environment; 11) *observer relativity*. The complexity of systems depends on how we observe and describe them. Measures of and judgments about complexity are not independent of the observer and her choice of measurement apparatus [8, p. 111-112].

A complex system manifests its phenomenal richness; consequently, it demands new ways of scientific analysis, as well as a new framework of categories. Synergetics suggests the integrity of methods elaborated in various disciplines and a wider variety of models to represent complexity of organic and inorganic systems.

Human language is to be understood as a complex synergetic megasystem, which changes and develops in compliance with the universal principles of the complex system's behavior revealed within the theory of synergetics. A human language represents a hierarchically organised megasystem, in which all the components (elements, subsystems, parts etc.) are coherently linked at all structural levels. A degree of complexity of any system is determined not only by a great number of its components, but also by a wide range of links and interactions among the components within the system, as well as by their ability to establish new (e.g. paradigmatic, syntagmatic, etc.) relations with other components and to fit in the existing links. The system's complexity is closely connected with its flexibility and dynamism. It is obvious that language is always dynamic and undergoes both outer and inner influence. The language mega-system consisting of hierarchically structured and interconnected systems and subsystems is only relatively stable. Precisely speaking, it is unevenly stable, for some parts of it can be in equilibrium at a given moment, while the other parts are not.

The language system is flexible and is open to changes. However, its subsystems change at a different rate. A history of the English language proves that phonetic processes are of highest dynamics, while grammatical structures tend to remain more or less stable over the time. This confirms the supposition that the rate of changes taking place at different hierarchic levels of the language mega-system is in inverse proportion to the «size» of a language component: the less the component is, the more it is subjected to changes, and vice versa (here, by «size» is understood not so much the linear length of the given component but its structural organisation). The degree of potential mobility of language levels increases towards structural simplicity of a language unit.

To retain its activity and functionality, a system should be not only dynamic but also flexible, i.e. a system must be able to adjust to changeable outer conditions, to alter its inner structure and behaviour, to select new options for a harmonised existence in the environment. Dynamism, flexibility, adaptability of a given system, as well as a complicated variety of links among the system's components make up the notion of «complexity».

Some scholars – most notably academician O. M. Sharkovskyi of the National Academy of Sciences of Ukraine – have articulated two fundamental types of complexity: disorganized (or chaotic) complexity and organized complexity. According to Sharkovskyi, disorganized complexity is characterized by a large number of elements or subsystems interacting in a seemingly random or incoherent manner; this type of complexity is amenable to analysis using statistical and probabilistic methods. By contrast, organized complexity arises when components are interconnected by well-defined interdependencies; the behavior of the whole system depends not only on the properties or frequencies of individual elements, but also on the specific nature of their relationships and interactions [4].

Sharkovskyi emphasizes that: *disorganized complexity*: many parts interact without coherent structure, describable via probability theory and statistics; *organized complexity*: structure is emergent from deterministic, interdependent relationships; understanding requires detailed knowledge of element-to-element connections beyond aggregate statistics.

Besides being dynamic and adaptive, a complex system must be open. «Openness» should be understood in the functional aspect, i.e. as the ability of the system to interact with other systems of the world, whatever their nature is. This interaction may include information exchange, energy exchange and / or substance exchange. Everything in the world is closely connected with one another; things and phenomena may be seen as separate only at a certain stage of the scientific study and for certain research reasons, because all that exists is integrated into the common network of interactions and interlinks.

To retain its form and functioning, the system may only allow insignificant fluctuations, i.e. such deviations in the dynamics of its components that do not lead to any disorder or chaos but preserve the subordination of the system's components. In case of significant fluctuations, a part of a system or the whole system may lose equilibrium and enter the state of chaos and instability, which usually leads to a qualitatively new behaviour of the system and, as a result, to a new state of the system. The so-called order parameters function as synchronizers of the behaviour of the system's components. Order parameters are certain constants of the system determining the coordinates and the configuration of states of the system at a given moment or period of time and providing the system's ability to function.

In language, the role of order parameters is performed by various grammatical categories. In the course of time and as a result of the system's openness, the nomenclature of order parameters may change (compare, for instance, the parameter of word order in Old English to that of in Modern English). The definition of language as a synergetic system should be supplemented with one more notion – the notion of non-linearity. Non-linearity as a mathematical notion stands for a certain type of mathematical equations that may have several absolutely different solutions. Non-linearity of a language system is revealed in dependency of features and functions of the system on behaviour of each of its component. The notion of linearity is probably applicable if we want to denote the order of language elements in a speech chain.

Summing up, human language can be defined as a complex synergetic megasystem, which changes and develops in compliance with the universal principles of the complex system's behaviour revealed within the theory of synergetics. It is an open, dynamic, non-linear, self-organizing system with all its hierarchical subsystems and elements coherently interconnected and controlled by governing parameters.

Linguistic synergetics is a new stage in the investigation of language as an open self-regulating system. It offers new ways of describing the conventional object of analysis by using another meta-language and tools, and leads the science of language to a cross-disciplinary orbit.

The main task of linguistic synergetics is to reveal, describe and explain the mechanism of the inner dynamic structure of a language using research principles of synergetics as a paradigm of complexity. Diachronic synergetics, in particular, aims at modelling and interpretation of phase-shifts of the system, as well as at projecting possible variants of its change depending upon many-directional bifurcations and a variety of potential attractors. The main idea of diachronic synergetics lies within multi-directional non-linear evolution of language system. The concept of non-linearity is the most essential one for language development.

The main aim of diachronic linguosynergetics is seen in capturing language in a state of change, when the language system follows a non-linear path, through numerous fluctuations and dissipation leading out of chaos to order and stability.

A close examination of historical changes in English within different language levels indicates that language never changes chaotically but has an underlying order based on the so-called *space of states* (a synergetic term), which provides directed chain-like mode of micro- and macro changes without positional skipping and contributes to preserving functional capability of the given system.

Our research [1] has proved that like any synergetic system, language has its own space of states, represented by the main morphological (topological) types of organization (agglutinating, analytic, inflectional, poly-synthetic or incorporating, and isolating, or root). We suggest that under certain conditions any language is able to move along this space, changing its grammatical structure. Moreover, the history of the English language provides evidence of it.

STAGE TWO. The task of the second stage of the experiment is practical: to organize students in studying the typological shift of English – its transition from the synthetic type of grammatical organisation to analytical. At this stage we start with defining the notions of morphological types of languages, then students are asked to do a practical task.

Modern English belongs to analytical languages. However, elements of the other morphological types can be found in English, as well. The use of inflections (*work-s*, *work-ing*, *work-ed*, *work-er*, *work-ing-s* etc.) reveals remnants of the synthetic type to which Old English belonged. The lexeme *child-ren-’s* in which grammatical categories are expressed separately (those of number and case) is a perfect example of agglutination. The dominant type of syntactic relations, i.e. adjunction, is but a common feature of the English sentence (e.g. *Dad saw John sleep like a log last night*), and is typical of isolating languages. Meaning its rather rigid word order, some scholars speak of Modern English as drawing closer to isolating languages.

During the experiment, the students were asked the following questions: What can account for absence of typologically «ideal» or «clear» languages? Why is it possible within the grammatical system of any national language to come across typological relics of other kinds? How can we explain emergence (in a given language) of new features characteristic of other types of morphological classification of the world languages?

The answer seems to lie in the existence of the space of states of language as a synergetic system. The space of states of a language includes all possible morphological types above mentioned.

To show what is meant, a few linguistic facts from the history of English are to be considered.

Traditionally, the history of the English language is divided into three periods: Old English, Middle English, and Modern English. Regarded from the type of the grammatical organization and following B. Shaw's observations, these periods are also referred to as the period of full inflections (Old English), the period of leveled inflections (Middle English), and the period of lost inflections (Modern English).

Obviously, Old English was a synthetic language. Old English (OE) nouns, adjectives, numerals and most semantic classes of pronouns had an elaborated system of inflections to mark a variety of grammatical categories (e.g. case, number, and gender). Moreover, there existed a number of types of declension of OE nouns. OE adjectives had a twofold declension – strong and weak depending upon their syntactic position, degree of comparison and the noun with which they agreed. The two OE participles (the Present Participle and the Past Participle) had a weak and a strong declension each. OE possessive pronouns, interrogative, indefinite, negative and relative pronouns changed according to the strong type of declension of adjectives. Some other pronouns and ordinal numerals had inflections of a weak type of declension of adjectives. The grammatical category of number of OE personal pronouns included, besides singular and plural, the dual number. The OE verb had the grammatical categories of mood (the Indicative, the Imperative, and the Subjunctive), of tense (Present and Past), of number (Singular and Plural), of person (1st, 2nd, and 3rd) and a rather complicated system of conjugation depending upon the verb class. All above mentioned is but a fragment of a complex morphological system of Old English. A high degree of cohesion between words in a sentence allowed the so-called free word-order in Old English.

A trigger for further changes in the morphological system of English is seen in the Scandinavian invasion of the British Isles in the late IX c. Scandinavian dialects belonged to the North Germanic group of languages and had much in common with Old English. Many everyday words in Scandinavian dialects and Old English had cognate root morphemes, which made the communication easier. However, it was complicated by case endings which were different in the languages. Gradually, the inflections were levelled, reduced and lost, drawing English towards the analytical type of language organization.

For our experiment, we chose five versions of *The Lord’s Prayer* belonging to chronologically different periods of the English language history, namely:

- I. – XI c. (Old English: Matthew 6.9 ; West Saxon Copy),
- II. – 1380. (Middle English: Matthew 6.9; Wycliffe’s translation),
- III. – 1611. (Modern English: The King James Bible),
- IV. – 1928. (Late Modern English: Book of Common Prayer) и
- V. – 1977 (New English Version, adopted by the Church of England).

Written at different time periods, the texts of the Bible are a perfect illustration of changes that took place in the English language during the millennium. Using J. Greenberg’s methods of analysis of morphological typology of languages, the students taking part in the experiment calculated a synthetic index for each of the versions of the Prayer. Then they put obtained data in the following table:

Table 1.
A historical dynamics of the synthetic index of English

Column I	Column II	Column III	Column IV	Column V
Old English	Middle English	Modern English	Late Modern English	New English
0, 5	0, 2	0, 1	0,1	0,1

The students report that the highest index refers to version I, while version 2 has a bit lower index, and the later versions have practically the same index value. Then the students are asked to represent historical dynamics of the synthetic index of English graphically:

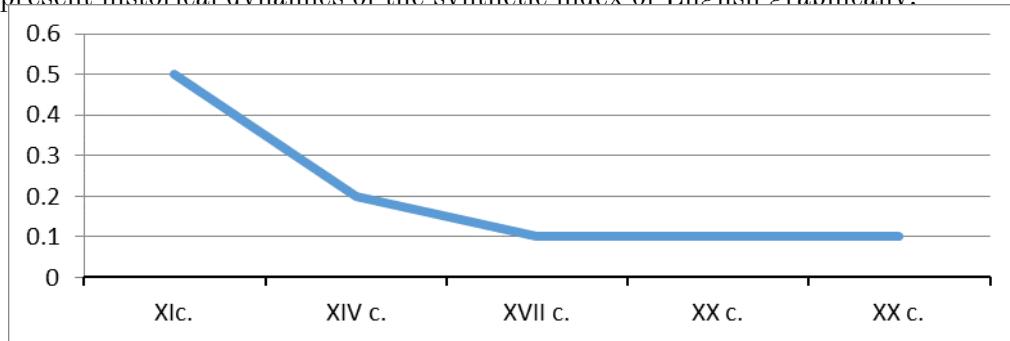


Figure 1. The historical dynamics of the synthetic index of English

Thus, the students obtained the data revealing dynamism of the language system and showing that a phase-shift took place in the structural organization of the system in the given period. A change of one parameter in a synergetic system triggered a chain reaction in the other parts of the system, which finally led the instable system to a structural re-organization.

1. Prospects for further research development

Further research in diachronic linguosynergetics may proceed in several promising directions:

- elaboration of models of language evolution using nonlinear dynamics and chaos theory;
- application of synergetic principles to comparative historical linguistics;
- interdisciplinary integration with cognitive science, sociolinguistics, and digital humanities;
- practical implementation in language pedagogy, particularly in designing university curricula on the history of English and historical linguistics.

Such developments may not only refine the theoretical framework of linguistics but also contribute to more effective and scientifically grounded teaching methodologies.

2. Conclusions The history of the English language, though often perceived as one of the most difficult linguistic disciplines, acquires new explanatory depth when studied through the lens of synergetics. Viewing language as a complex, nonlinear, and self-organizing system allows scholars and students alike to transcend the mere enumeration of changes and instead to comprehend the mechanisms underlying linguistic transformations.

Diachronic linguosynergetics, as a multidisciplinary research approach, integrates philosophy, linguistics, and synergetics, thus offering a holistic perspective on language evolution. Its implementation in pedagogy not only enhances comprehension but also develops students' critical, analytical, and interdisciplinary thinking skills, which are indispensable for future philologists.

Conclusion. Modern education requires a fundamental methodological renewal. In the changing world of today, teaching methods must focus on fostering new skills in information processing, analysis, and critical comprehension. Accordingly, education should be multidisciplinary, acquainting students not only with the latest findings but also with the methodological innovations emerging in both the humanities and sciences. The increasing complexity of contemporary scientific challenges necessitates a paradigm shift – from linear and reductionist models to nonlinear and synergetic ones. This transition reflects a broader conceptual evolution from stability and isolated disciplines toward dynamic systems and integrated knowledge. Ukrainian scholars such as O. M. Sharkovskyi and I. O. Snehiriov emphasize the necessity of distinguishing between disorganized and organized complexity, underscoring the need for nonlinear frameworks capable of explaining the interdependent character of modern systems. A synergetic approach to language studies makes it possible to conceptualize language as a

system marked by openness, dynamism, nonlinearity, broken symmetry, hierarchy, and irreversibility. Such an approach allows researchers to reveal the emergence of language, the peculiarities of its nonlinear development, the coherent behaviour of its components and subsystems, and the decisive role of external factors (e.g., language contacts). Language history is inseparable from the history of its speakers: both language and society undergo numerous fluctuations toward new balanced states. Their development is nonlinear, progressing through chaos toward order and stability. By uncovering mechanisms and principles of language change, linguists can foresee potential trajectories of linguistic evolution and anticipate the behaviour of language systems in the future. Thus, the value of synergetics, and of diachronic linguosynergetics in particular, is difficult to overestimate in modelling the historical changes of language and society. A synergetics-based approach to teaching the history of English has already proved its effectiveness, contributing substantially to the development of professional competence among university students majoring in English philology.

Література

1. Домброван Т. І. Сінергетична модель розвитку англійської мови. Одеса : КП ОГТ, 2014. 400 с.
2. Домброван Т. І. Вступ до лінгвістичної сінергетики. Вид-во : Кембрідж, 2018. 152 с.
3. Полягін О. О., Петренко М. В., Кривий С. В., Бойко М. О., Малахов К. С. Онтологічно-орієнтована обробка міждисциплінарних знань у певній галузі : монографія. Вид-во : Ames, Iowa : Iowa State University Digital Press, 2023. 189 с.
4. Снєгірьов І. О. Нелінійне світорозуміння: погляд навскіс. *Філософія науки: традиції та інновації* : науковий журнал. Суми : СумДПУ ім. А. С. Макаренка, 2019. № 1 (19). С. 110–128.
5. Шарковський О. М. Теорія складних систем : структурні підходи та методологія. Київ : НАН України, Інститут системного аналізу, 2015. 312 с.
6. Barber, Charles, Joan C. Beal and Philip A. Shaw (2009). The English Language: A Historical Introduction. Cambridge : Cambridge University Press. 299 p.
7. Baugh, Albert C. and Thomas Cable (2006). A History of the English Language. L., Routledge. 459 p.
8. Bishop, Robert C. Metaphysical and epistemological issues in complex systems. In: Hooker, Cliff (ed.) *Philosophy of Complex Systems* [Handbook of the Philosophy of Science. 2011. Vol. 10]. Amsterdam; Boston, Heidelberg, London, etc. : Elsevier B.V. PP. 106 – 136.
9. Blake, Norman F. A History of the English Language. Basingstoke & London : MacMillan Press Ltd. 1996. 400 p.
10. Crystal, D. The Stories of English. London : Penguin. 2004. 271 p.
11. Haken, Hermann. Information and Self-organization: A Macroscopic Approach to Complex Systems. (Springer Series in Synergetics). Berlin : Springer-Verlag. 2000. 258 p.
12. Haken, Hermann. Synergetics. An Introduction. (Springer Series in Synergetics). Berlin : Springer-Verlag. 1977. P. 7.
13. Hooker, Cliff. Introduction to Philosophy of Complex Systems. Philosophy of Complex Systems [Handbook of the Philosophy of Science. Vol. 10]. Amsterdam; Boston, Heidelberg, London, etc. : Elsevier B.V. 2011. PP. 3 – 90.
14. Jespersen, O. Growth and Structure of the English Language. Oxford : Blackwell. 1938. 280 p.
15. The Cambridge History of the English Language. Vols. 1-6. Cambridge : Cambridge University Press. 1992-2001. 664 p.
16. The Lord's Prayer in English. URL: <http://www.ruf.rice.edu/~kemmer/Words04/history/patrnoster.html>
17. The Lord's Prayer (modern). URL: <http://www.lords-prayer-words.com/>

References

1. Dombrovian, T. I. (2014), *A Synergetic model of the English language development* [Sinergetichna model rozvitku angliiskoyi movu]. Odesa : KP OGT, 400 p.
2. Dombrovian, T. (2018), *An Introduction to Linguistic Synergetics* [Vstup do lihnvistichnoi synerhetyky], Cambridge Scholars Publishing, 152 p.
3. Polyahin, O. O., Petrenko, M. V., Kryvyyi, S. V., Boiko, M. O., Malakhov, K. S. (2023), *Ontology-driven processing of transdisciplinary domain knowledge (Monograph)* [Ontolohichno-oriintovana obrobka mizhdystyplinarnykh znan u pevnii haluzi : monohrafia]. Ames, Iowa: Iowa State University Digital Press. 189 p. Available at: <https://doi.org/10.31274/isupd.2023.140>
4. Sharkovskiy, O. M. (2015), *Theory of complex systems : Structural approaches and methodology* [Teoriia skladnykh system : Strukturni pidkhody ta metodolohiia], Kyiv: NAS of Ukraine, Institute of System Analysis, 312 p.
5. Snehiriov, I. O. (2019), *Nonlinear worldview: A slanted view. Philosophy of Science: Traditions and Innovations: Scientific Journal*. [Neliniine svitorozuminnia: pohliad navskis. Filosofiiia nauky: tradytsii ta innovatsii: naukovyi zhurnal], № (1)19, pp. 110–128.
6. Barber, Charles, Joan C. Beal and Philip A. Shaw (2009), The English Language: A Historical Introduction. Cambridge : Cambridge University Press. 299 p.
7. Baugh, Albert C. and Thomas Cable (2006), A History of the English Language. L., Routledge. 459 p.
8. Bishop, Robert C. (2011). Metaphysical and epistemological issues in complex systems *Philosophy of Complex Systems* [Handbook of the Philosophy of Science. Vol. 10]. Amsterdam; Boston, Heidelberg, London, etc. : Elsevier B.V. pp. 106-136.
9. Blake, Norman F. (1996), A History of the English Language. Basingstoke & London : MacMillan Press Ltd. 400 p.
10. Crystal, D. (2004), The Stories of English. London : Penguin. 271 p.

11. Haken, Hermann (2000), *Information and Self-organization: A Macroscopic Approach to Complex Systems*. (Springer Series in Synergetics). Berlin : Springer-Verlag. 258 p.
12. Haken, Hermann (1977), *Synergetics. An Introduction*. (Springer Series in Synergetics). Berlin : Springer-Verlag. P. 7.
13. Hooker, Cliff (2011), *Introduction to Philosophy of Complex Systems : Philosophy of Complex Systems [Handbook of the Philosophy of Science. Vol. 10]*. Amsterdam; Boston, Heidelberg, London, etc. : Elsevier B.V. PP. 3-90.
14. Jespersen, O. (1938), *Growth and Structure of the English Language*. Oxford : Blackwell. 280 p.
15. The Cambridge History of the English Language (1992-2001). Vols. 1-6. Cambridge : Cambridge University Press. 664 p.
16. The Lord's Prayer in English. Available at: <http://www.ruf.rice.edu/~kemmer/Words04/history/patrnoster.html>
17. The Lord's Prayer (modern). Available at: <http://www.lords-prayer-words.com/>

ДОМБРОВАН Тетяна Іванівна,
доктор філологічних наук, професор, професор кафедри англійської філології та перекладознавства
Одеського національного політехнічного університету;
проспект Шевченка, 1, Одеса, Україна
e-mail: dombrovanti@gmail.com
<https://orcid.org/0000-0003-3119-5499>

ФОРМАНОВА Світлана Вікторівна,
доктор філологічних наук, професор, професор кафедри іноземних мов та перекладу
Одеського національного морського університету;
вулиця Мечникова, 34, Одеса, Україна
e-mail: svetlanaformanova@gmail.com
<https://orcid.org/0000-0001-9434-1903>

БОСА Тетяна Сергіївна,
старший викладач кафедри мовної підготовки та міжнародної комунікації
Одеської державної академії будівництва та архітектури;
вулиця Дідріхсона, 4, Одеса, Україна
e-mail: tatabosaya2007@gmail.com
<https://orcid.org/0000-0002-0806-6528>

ПОШУК НОВИХ ШЛЯХІВ ПРОФЕСІЙНОГО РОЗВИТКУ СТУДЕНТІВ: ІННОВАЦІЙНИЙ ПІДХІД ДО ВИКЛАДАННЯ ІСТОРІЇ АНГЛІЙСЬКОЇ МОВИ В УНІВЕРСИТЕТИ

Анотація: Ця стаття орієнтована на використання інноваційної методики викладання історії англійської мови студентам ВНЗ, що пов'язує дослідження історії мови з синергетикою як новою міждисциплінарною дослідницькою програмою. У статті наведено вступ до деяких основних концепцій лінгвістичної синергетики як нового підходу до вивчення мови. Особливий акцент робиться на визначені синергетичної системи. Синергетичний підхід до вивчення мови, тобто діахронічна лінгвосинергетика, зосереджується на принципах і механізмах зміни та розвитку мови та використовує методологічну цілісність філософії, лінгвістики та синергетики. **Об'єктом** цього дослідження є англійська мова в її діахронічному вимірі, зокрема історична еволюція її фонетичної, морфологічної, лексичної та синтаксичної підсистем. Дослідження зосереджено на процесах змін і трансформації в мовній системі, розглядаючись через призму синергетики як науки про самоорганізацію та складність. **Предметом** даної роботи є застосування синергетичної методології до вивчення та викладання історії англійської мови. Зокрема, дослідження наголошує на діахронічній лінгвосинергетиці як міждисциплінарному підході, який поєднує лінгвістику, філософію та синергетику для пояснення механізмів зміни мови. Метою статті було визначене вирішення наступних **завдань**: обґрунтувати ідею, що англійська мова, як і інші природні мови, є складною системою самоорганізації; продемонструвати, що методологія синергетики може ефективно пояснити механізми лінгвістичної еволюції; показати, як впровадження синергетичних принципів у викладанні історії англійської мови може сприяти глибшому розумінню, критичному мисленню та професійній компетентності майбутніх філологів. З точки зору запропонованого підходу, людська мова вважається відкритою, динамічною, нелінійною, самоорганізуючою системою з усіма її ієархічними підсистемами та елементами, когерентно взаємопов'язаними та керованими керуючими параметрами. Знання механізмів і принципів зміни мови може допомогти передбачити різноманітність потенційних станів аналізованої складної системи і передбачити поведінку останньої в майбутньому. Стверджується, що лінгвістична синергетика здатна вирішити широкий спектр питань, що стосуються зміни мови. Проливає нове світло на розвиток мови та дозволяє краще описувати фазові переходи або реконфігурації мови як синергетичної мегасистеми. Стаття також містить **результати експерименту**, який проводився в Одеському національному університеті імені І. І. Мечникова (англійське відділення факультету романсько-германської філології). У досліджені взяли участь 96 студентів третього курсу, які були розділені на дві групи: експериментальна (48 студентів) і контрольна (48 студентів). Студенти експериментальної групи були залучені до експерименту з упровадженням принципів синергетики і студенти контрольної групи продовжили навчання у звичний для них спосіб. Результати дослідження показали ефективність методу викладання історії англійської мови на основі синергетики для розвитку професійної компетентності студентів.

Ключові слова: лінгвістична синергетика, розвиток мови, синергетична система, англійська мова, історія англійської мови.

Статтю отримано 1.10.2025