

РАЗДЕЛ III. ЭТНОЛИНГВИСТИКА И ЛИНГВОКУЛЬТУРОЛОГИЯ  
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POSSIBLE REASONS FOR THE DIFFERENCES IN THE TYPES  
OF EXPRESSION OF EXPRESSION OF THE CATEGORY IN ENGLISH  
AND GERMAN

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**Abstract**

This article analyzes the process of diachronic changes in the morphological means of expression of the category of number in English and German from the point of view of the synergetic concept.

The article provides an overview of factors that cause the process of unification of the means of expression of the morphological category of number. A comparison of the morphological systems of two genetically related languages that have completely different ways of development may be of scientific interest. The article contains a number of assumptions about the reasons for the typological differences in the morphology of the German and English languages. The subject of the research are the evolutionary processes of the system of morphological means of expression in the category of number and diachronic changes in the relationship of the language systems.

The focus is on the morphological evolution of the morphological means in the category of number in English and German. The author provides an explanation of paradoxical phenomena related to the formation of the morphology in these languages on the basis of synergistic parameters.

The author makes an attempt to discover the cause-and-effect relationship in the language evolution and explore the mechanisms of morphological changes and proposes a model of synergy analysis of the evolution mechanism of the language system during the process of unification of the morphological means of expression of the category of number in English and German.

**Key words:** category of number; morphology of the category of number; linguistic evolution; synergetic linguistics; interference; dissipation; entropy; language system.

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ВОЗМОЖНЫЕ ПРИЧИНЫ РАЗЛИЧИЙ В ТИПАХ ВЫРАЖЕНИЯ  
КАТЕГОРИИ ЧИСЛА В АНГЛИЙСКОМ И НЕМЕЦКОМ ЯЗЫКАХ

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**Аннотация**

В данной статье анализируется процесс диахронического изменения морфологических средств выражения категории числа в английском и немецком языках с точки зрения синергетической концепции.

В статье представлен обзор факторов, обуславливающих процесс унификации морфологических средств выражения категории числа. Научный интерес может представлять сопоставление морфологических систем двух генетически родственных языков, имеющих совершенно различные пути развития. Статья содержит ряд предположений относительно причин типологических различий в морфологии числа немецкого и английского языков. Предметом исследования являются эволюционные процессы системы морфологических средств выражения категории числа в диахронии и взаимосвязь изменений в системе числа.

Основное внимание уделяется эволюции морфологических средств категории числа в английском и немецком языках, а также предлагается объяснение парадоксальных феноменов, связанных с формированием морфологии числа в рассматриваемых языках на основе синергетических параметров. Автор делает попытку выявить причинно-следственные связи в языковой эволюции и обнаружить механизмы морфологических преобразований и предлагает модель лингвосинергетического анализа механизма эволюции языковой системы в процессе унификации морфологических средств выражения категории числа в английском и немецком языках.

**Ключевые слова:** категория числа; морфология категории числа; языковая эволюция; лингвосинергетика; интерференция; диссипация; энтропия; языковая система.

Evolution in the broadest sense is a slow process that typically involves adapting the system to changes in the environment. However, changes in the individual levels of the language system (in our case, English morphology) can occur quickly. According to L.V. Bronnik, "synergetic methodology can be effective in explaining the mechanisms for rapid development of high-quality ... if it is created, it will be an important piece of the evolutionary-synergetic general scientific model of the world» [4, p.35]. The methodology of synergetics contributes to the quantitative linguistics. To Reinhard Köhler, «Synergetics is a special type of systems theoretical modelling whose specific characteristic is the treatment of the spontaneous rise and development of structures». [9, p. 41]. The exponents of this interdisciplinary approach in the field of linguistics have shown that synergetics is also compatible with the functional analytic models and explanatory approaches of quantitative linguistics. It provides concepts which are applicable to the phenomena of self-regulation and self-organisation as they are investigated in quantitative linguistics.

In this case we are primarily interested in the formation of the number morphology: «Although the basis of the number category is opposed to "one - more than one," the distinction between single and multiple accounts suggests an idea of count. A count is also quantified certainty while category of number transmits primarily quantitative uncertainties» [ 5, p. 141].

Consider more detailed the process of unification of the means of expression of the morphological category of number in English and German from the point of view of the general synergetic model of complex systems. Let's imagine that there is a stable open system. In our case it is the system of morphological characters of the category, for example, in Old English. At some point, the system is subject to some external influences, for example: spreading by the Norman invaders of their culture and language in England and then close integrity of the English language with the language of Scandinavian tribes in the north of the country.

These external factors distort the fluctuations system existing at that time in the language. The source of the fluctuations in this case is the need of

communication between the hosts and conquerors. When the amount of entropy in the system reaches a certain level, it comes to a critical state in its development, which is called a bifurcation point. At this point, the way of evolution of the system is not defined. The system scans a certain amount of available fluctuations, making a decisive choice in favor of one of them. This option breaks the symmetry of the whole system, as the selected fluctuation has a preference. The adapting process of the other system parts begins, they try to accept the changes, so self-organization process runs. In these conditions new dynamic states are formed - dissipative structures. Prigogin describes them as a "stationary state stable cooperative movement" [10, p. 53]. The dissipation is of great importance in the unification of system parts, because eliminates redundant unsustainable structures, leaving only those that correspond to the changed conditions of existence in the system. In such cases, either system dies in general, or "stepping over" the chaos, it goes to a new stable state. At the same time within this chaos begins to form a new system procedure (the so-called dissipative structure) with a new self-ordering and new mechanisms of self-organization.

By A.M. Amatov, in this case "dissipation» means «emissions outside» of outdated elements and structures, which are replaced by the new ones. [ 2, p.6]. In our case the unification of the morphology system does not use the "external supplies". The system selects significant attractors - available in the language endings - (e)s and - (e)n. Due to the significant reduction in the number of morphological means of expressing plural nouns, the symmetry of the system is seriously disturbed, entropy increases, and in the end less powerful attractor - (e) n no longer attracts the elements, so derived morphological means of expressing the number of categories is only the ending - (e)s.

Information entropy (degree of uncertainty signal) was named in honor of mathematician Shannon "Shannon's entropy." In fact, the entropy of language - is a measure of the uncertainty degree of linguistic sign. Shannon derived the formula for measuring the level of information entropy:

$$H(X) = \sum_{i=1}^n p(x_i) \log_2 \left( \frac{1}{p(x_i)} \right) = - \sum_{i=1}^n p(x_i) \log_2 p(x_i)$$

using that, "... we can express the entropy index as the ratio of the sum of the content of the plans to the amount of expression of plans set in the language at a particular time :

$$U = \frac{\sum C}{\sum F}$$

For any language subsystem consisting of  $n$  elements having values  $m$ ,

$$U = \frac{\sum_{i=1}^m C_i}{\sum_{j=1}^n F_j}$$

where the  $U$  - rate uncertainty of linguistic sign (of uncertainty),  $C$  - content of the plan and the  $F$  - plan of expression.

Now, if we substitute  $U$  in the formula (1), we see that for  $U > 1$ , the entropy of the language is more than 0 ( $H(L) > 0$ ), for  $U = 1$  entropy is zero ( $H(L) = 0$ ), and when  $U < 1$  is negative entropy ( $H(L) < 0$ ) » [1, p.14].

This formula is valid for consideration of the entropy level inside a separate part of the system, such as in this case - of the morphology. This formula is valid for consideration of the entropy level inside a separate part of the system, such as in this case - of the number morphology.

For example, in Old English period are accounted for an average about 9 morpheme to express numbers (such as *u, an, on, að, n, zero morphem, mutation, en*) and by the end of the Middle English period is only one productive morpheme - (*e*) *s*. If you do not take into account some isolated remnants of non-derivative plurals formed by other morphological means, based on the above formula, it can be argued that the level of entropy in Old morphology number was below 9 times than the same figure in Middle English.

The coexistence in the same territory, two language systems - English and Scandinavian (not to speak about the number of dialects) naturally led to the interference of language, including morphology. Interference is usually defined as "a set of different attributes expressions given point in the two comparative systems, forming a third one, where the laws of the native and non-native languages work. Interference is caused by the complexity of administration and fixing in a memory a set of various features of the third system and unconsciousness

transition to each of the two systems when constructing and understanding the text » [3, p.25].

So, interference may be viewed as the transference of elements of one language to another at various levels including phonological, grammatical, lexical and orthographical [7].

Code switching may also be considered in relation to language acquisition. A number of theories have been postulated as to how an individual attains language and these will now be outlined. The first to be considered is that of Chomsky [8] where he suggests that language acquisition takes place as the brain matures and exposure to the appropriate language is obtained.

This dynamic process of adaptation can lead to the development of new structures for communicative functions required, or to the elimination of elements which are not required any longer, but which may eventually be used for other purposes.

Today linguists have learned to predict the phenomenon of linguistic interference. So, comparing the grammatical system of two interacting languages and determining their differences, it is possible to make a list of potential forms of interference. However, not all of them can actually be realized. The number of features implemented in the list, their depth depends among other things on the system state at the time of contact situation. The degree of genetic kinship of languages in contact has a significant impact on the solution of the system in favor of change of certain grammatical phenomena in the process of interference. In this case, the rule is: the more is the degree of similarity between languages, the more is the likelihood of interference.

The phenomena of interference, as a rule, take place initially at the level of speech and constitute abnormalities of speech, they are used primarily of the undereducated population. In England, for several centuries due to the Norman conquest French was the dominant language. It was the language of the court, the government, the judicial institutions and churches. English was shifted to a lower social sphere: it was used by the peasants and the urban population. Moreover, during Scandinavian conquests rules of the English language were not recorded in writing, language development was freely and easily, language was left to himself.

The process of language change as a result of interference described by J. Bagan as follows:

«Because the operating structure in different languages is different, in the process of speech formation in a foreign language verbal expression is complicated by the fact that the selection of linguistic resources emerge nominees, the grammatical rules of the native language in the power of the old strong skills registration statements, that is, there is a superposition of two systems in the process of speech, which in its turn leads anyway to interference» [3, p. 206]. We could add to the picture described that Scandinavian language in the Middle English period created a situation of strong instability of the system of the English language, which has arisen precisely because of its typological and genetic proximity. There could be two ways: preservation of the old system or morphological morphology or easing of morphology and the transition to a new type of language. The system has chosen the latter.

A.M.Amatov therefore wrote: «Increasing the entropy of the system can result in its bifurcation state, the transition from stable to unstable state of the system, which represents an escalation mode. In escalation mode system becomes sensitive even to small fluctuations, and to remove the system for a particular evolutionary path at the time of aggravation can rather minor impacts.» [2, p.8].

In the German language it happened in a different way. Despite the fact that the level of entropy in the system of language Middle High remained relatively high due to the parallel operation of a huge number of dialects, compete with each other, the volume of morphological unifications was significantly less than in the English language system. Dialects, of course, were even more genetically similar to each other than in the case of English - Scandinavian. However, Germany is gradually emerging in the interest of the people in standard language, this desire led to the preservation of the system of functional elements это стремление ведет к сохранению функциональных элементов системы, formation of a national language inhibits the destruction of the morphology. And, although the real literary language in the Middle High period is not observed, during this period there are special versions of the language that "try" for the role of the literary one. This is a very important point to maintain the stability of the existing language system. The development of the morphology goes in a completely different direction, and as a result in modern German there is a wide range of morphological means of expression of the category of number.

During the Middle German period literary norms of the German language came to the foreground,

options of standard forms continued to develop - first language of courtly poetry, then the language of the burgher clerical script, and later the language of the lower clergy (religious orders of the Franciscans and Dominicans). These are the most significant variants in writing the national language, they became the basis for creating a conventional literary version of German language. In this case, the system was not aimed at the destruction of the existing means of expression values but at their preservation and creation and this tendency was maintained at the state level, as a standard, common language was an important prerequisite for the success of the feudal lords in the commercial, military and political affairs.

Perhaps in English in other historical circumstances such instability would not play a critical role in the evolution of the morphological system. Except of mixing Middle English dialects with Scandinavian, the Norman conquest definitely played their role in the process of unification. During this period, constraining mechanisms that normally are used at the state level in the political, commercial matters, legal proceedings, etc. stopped working. In such a situation gradually emerge requirements for the unity of the literary norm.

In Germany, despite the strong fragmentation of the language, the feudal lord and peasant talked to one and the same language - the territorial dialect. Sometimes dialects split up into smaller ones, but communicative necessity nevertheless required support and compliance of certain rules while using dialect. Germany has not been subjected to such significant gains. On the contrary, the German feudal lords and then entrepreneurs conquered successful to the east. In the conquered lands evolved new dialects resettlement, which were characterized by mixing and integration Thus bilingualism situation in German was partially present, but the languages in the conquered territories were not so close to German, as is the case with the British and Scandinavian dialects. Besides conqueror position dictated the dominant role of the German language, in contrast to subordinate role of the English language during the forays of Scandinavian Vikings.

#### Список литературы

1. Амагов А.М. Диссипация и самоорганизация в системе естественного языка // Научные ведомости БелГУ. 2009. №14 (69) Выпуск 4. С. 10-18.
2. Амагов А.М. О синергетике естественного языка: энтропия, диссипация, самоорганизация // Синергетическая лингвистика vs лингвистическая синергетика. Материалы междунар. науч.-практ. конференции (г. Пермь, 8-10 апреля 2010 г.) . 2010. С. 7 - 15.

3. Багана Ж. Языковая интерференция в условиях франко-конголезского билингвизма : дисс. ... д-ра филолог. наук. Саратов, 2004. – 350 с.

4. Бронник Л.В. Когнитивно-синергетический подход к языку: предпосылки, сущность, терминология и статус // Синергетическая лингвистика vs лингвистическая синергетика. Материалы междунар. науч.-практ. конференции (г. Пермь, 8-10 апреля 2010 г.). 2010. С.31-40.

5. Мишанова Ю.В., Блохина А.О. Особенности перевода собирательных существительных // Актуальные вопросы теории и практики перевода: сборник научных трудов. Выпуск II. 2013. С.70-73.

6. Пригожин И. Философия нестабильности // Вопросы философии. № 6. М., 1991. С. 46-52.

7. Berthold M., Mangubhai, F., Batorowicz, K. Bilingualism & Multiculturalism: Study Book. Distance Education Centre, University of Southern Queensland: Toowoomba, QLD. 1997.

8. Chomsky N. Language and Mind. Harcourt Brace Jovanovich: New York. 1972.

9. Köhler R. Synergetic Linguistics //Contributions to Quantitative Linguistics. Cluwer Academic Publishers. 1993. P. 41-51.

10. Naumann S., Grzybek P. Synergetic Linguistics Text and Language as Dynamic Systems. Wien: Praesens Verlag. 2012.

## References

1. Amatov A.M. Dissipation and Self-organization of the System of Natural Language. Belgorod: NIU BelGU, 2009, Pp. 10-18.

2. Amatov A.M. About Synergetics Natural Language: Entropy, Dissipation, Self-organization. Perm: 2010. Pp.7-15.

3. Bagana J. Language Interference in French-Congolese Bilingualism. Saratov: 2004, 350 p.

4. Bronnic L.V. Cognitive-synergetic Approach to Language: Background, Nature, Terminology and Status. Perm: 2010. Pp. 31-40.

5. Mishanova Y.W., Blokhina A.O. Peculiarities of Translation of Collective Nouns. Tambov: 2013. Pp. 70-73.

6. Prigozhin I. Instability Philosophy. M.:1991. Pp. 46-52.

7. Berthold M., Mangubhai, F., Batorowicz, K. Bilingualism & Multiculturalism: Study Book. Distance Education Centre, University of Southern Queensland: Toowoomba, QLD. 1997.

8. Chomsky N. Language and Mind. Harcourt Brace Jovanovich: New York. 1972.

9. Köhler R. Synergetic Linguistics //Contributions to Quantitative Linguistics. Cluwer Academic Publishers. 1993. P. 41-51.

10. Naumann S., Grzybek P. Synergetic Linguistics Text and Language as Dynamic Systems. Wien: Praesens Verlag. 2012.