

*Bilyanina V.,**PhD in Linguistics,**Senior Lecturer at the Department of Oriental Languages  
National Academy of Security Service of Ukraine**Kurianinova A.,**Student,**National Academy of Security Service of Ukraine*

## WORD-PALINDROMES AS A MANIFESTATION OF SUPRANATIONAL MENTALITY: ON THE EXAMPLE OF ENGLISH AND CHINESE LANGUAGES

**Summary.** The article is devoted to the disclosure of the National-Linguistic Picture of the World of English- and Chinese-speaking peoples on the basis of the presence and development of a common linguistic phenomenon – the Palindrome. The study reveals the peculiarities of the formation and development of this linguistic phenomenon (an attempt to identify primary and secondary sources in both languages with the subsequent allocation of basic cultural and religious preconditions for their origin and existence), its verification (by types (natural, artificial) and styles (linguistical, mathematical, musical, technical)), classification (Words-Palindromes, Phrases-Palindromes, Sentences-Palindromes, Palindromes-Texts (Pseudo-Palindromes and Palindromes-Rectus)), specifics of structure (Nouns, Verbs, Adjectives, Exclamations, Adverbs) and transformations (transition, pairs of reverse reading, Palindrome from one part of the language to another) in two comparable languages. Statistical and analytical data of mechanical sampling of Words-Palindrome from English and Chinese dictionaries are presented and analyzed. The article reveals the assumption of the existence of a Supranational Picture of the World, based on the correlation of the results, which demonstrates the natural closeness of worldview models among analytical and synthetic language systems that support the primary sacramental meaning of Palindrome (endowment of Palindromes with supernatural healing and protective forces, replaced by the creation of these language units as intellectual exercises). The authors consider the ability of the Word-Palindrome, as the smallest form of this linguistic phenomenon, to carry out transformations within parts of the language in the English and Chinese language systems. The article considers the similarity of transformational schemes with the dominance of Nouns over Verbs, as well as the specified pair over Adjectives, Adverbs and Exclamations; at the same time, the possibility of the existence of a Supranational Linguistic Picture of the World is stated, due to the dominance of nominative natural Words-Palindromes inherent in both studied languages.

**Key words:** Palindrome, Word-Palindrome, National-Linguistic Picture of the World, worldview model, language system.

### Defining the problem and argumentation of the topicality of the consideration

The development of linguistic science for many years demonstrates research in the areas of formation and modification

of language and language phenomena, distinguishes between natural and artificial language formations, studies the commonalities and differences between languages of different language families. Despite the wide range of linguistic research, there are areas that are poorly covered among scholars. One of such spheres is the existence of an interethnic linguistic phenomenon that exists on the border between natural and artificial, named – Palindrome. Formed as a result of natural sound imitation, the Palindrome evolved into a phenomenon that spread beyond general linguistics and began to appear in mathematics, music, programming, and so on. Thus, the Palindrome is a unique language formation that is inherent in all existing languages of the world. Due to this fact, there are many studies of this linguistic phenomenon within different language systems. In this study, we seek to consider commonalities that can combine different language backgrounds. The relevance of the work is revealed in an attempt to consider the Palindrome as a manifestation of the supranational linguistic picture of the world on the example of English (analytical) and Chinese (synthetic) language.

**Analysis of recent research and publications.** According to the Oxford Living Dictionaries, Palindrome is a word or phrase that is read back and forth. It is formed by two Greek roots: “palin” (meaning “again”) and “drom” (formed from “dramein” meaning “run”) [1]. The oldest Palindrome written in Latin dates back to the IV century (“Sator Arepo tenet opera rotas”, which means: “The sower Arepo hardly holds the wheels”). By the X–XI centuries Palindromes spread first in Italy and then in Western Europe. Starting from the XII–XIII centuries information about it appears in textbooks of poetics and treatises on poetry [2]. Until the XIX century the creation of Palindromes was a preference to a limited number of people, and was an intellectual pastime. Only from the nineteenth century Palindromes became widely available to the general reader and started spreading to other fields, such as music, mathematics, programming, and so on. Among the researchers of the Palindrome in English, Bergerson G. was one of the most famous Palindromists in the world, whose greatest work “Palindromes and Anagrams” (1973) enjoyed success not only among word players, but also among serious logologists; Guch R. And Vordrov S. made a great impact to the problem by proposing the most common classification of Palindromes in “Encyclopedia of Palindromes”

(1996); another classification was suggested by Goodis J. in his work “Palindromes” (2015); Crystal D. is a leading English linguist who has studied the linguistic problems of English and methods of learning the language. These ideas were reflected in the “Cambridge Encyclopedia of English”.

To reveal modern approaches to the linguistic studies of the English language Palindrome there are some works worth mentioning. They are: “Equations on Palindromes and circular words” by Ariana Garon (2011), “Playing with Palindrome Words: A Method to Make Learning English Vocabulary Interesting” by Peng Yu (2018), “Palidrome: the union of two symmetrical tails” by Myroslava Tsvetkova (2020) etc. Researchers consider the Palindrome from the standpoint of its structure, semantics, phonetics, syntax, features of presentation.

In Chinese language Palindrome developed in poetry and literature, having a long lasting history. Among the researchers on Palindrome in the Chinese language there are works of Jing Ming, Mei Qingheng, Zhang Hongsheng worth mentioning. Their work is aimed at determining the oldest Palindrome and its author. For example, Mei Qingheng, who commented on Wen Xin Diao Long during the Ming Dynasty (1368–1644), considered the poet of the Song Dynasty (960–1279), He Daoqing, the first author of the Chinese Palindrome [3]. He is opposed by Jing Ming, who believes that the oldest Palindrome poems date back to the Han dynasty (206 BC–220), guided by the poetry of “壘中”, written by his wife Su Boyu [3]. Each succeeding generation of poets perfected their skills in the ability to create Palindromes. According to Zheng Hongsheng in his article “Palindrome works of the Qing dynasty and their heritage and development”, the creation of the Palindrome reached its peak during the Qing dynasty [4]. Contemporary researchers of Palindromes in China continue to focus on classical literature, such as Tingshu Hu in “The Example of the Official Translation of the Tang Poetry” (2013) examines Palindromes through the prism of the Tang Dynasty. Most researches on Palindromes in China are non-linguistic.

#### Setting the goals and tasks of the article

The *goal* of the study was to explain the phenomenon of the existence of the Palindrome in English and Chinese languages, as well as to prove the superiority of the phenomenon of Palindrome over the main feature of popular consciousness – the national language.

The following *tasks* contribute to the achievement of this goal:

1. To study previous research of the Palindrome in different language systems (English, Chinese).
2. To select Palindromes according to the dictionaries of the studied languages.
3. To make deep analyze of the achieved results.

The *object* of the study were Palindromes of English and Chinese languages, obtained by mechanical sampling.

#### The outline of the main research material.

Palindrome as a linguistic phenomenon has a long history of its formation and development. Today there are many species and classifications. According to the “Literary Devices” there are: Palindromes-Names, Palindromes-Words, Palindromes-Numbers, Palindromes-linear and Palindromes-texts [5]. S. Vordrov distinguishes: Words-Palindromes; Phrases-Palindromes; Pseudo-Palindromes (a phrase that changes meaning when read back); Rectus (excerpt from the text, consisting of at least one letter, at the location of which ‘in

a circle’ starting from two different places clockwise, you can read two different phrases); Super-Palindrome (a passage of text consisting of letters, at the location of which in a square table coincides the sequence of letters that reveal 4 reading ways: 1) in rows from left to right and from top to bottom; 2) in columns from top to bottom and from left to right; 3) in lines from right to left and from bottom to top; 4) in rows from bottom to top and from right to left) [6, p. 95–97]. For the purpose of a broader classification Goodis J. singles out Palindromes-Names: Anna, Alla, etc. [7, p. 45], and Michaelsen O. also defines as a separate species – Phonetic Palindromes, for such Palindromes the main thing is not the correspondence of spelling, but only the sound of the word [8, p. 78–79].

After analyzing the existing classifications, we offer our own:

1. *By types*: natural – primary, unconsciously formed by man; artificial – consciously created by man.
2. *By styles*: linguistic, mathematical, musical, technical.
3. *By classes*: Words-Palindromes, Phrases-Palindromes, Sentences-Palindromes, Palindromes-Texts (Pseudo-Palindromes and Palindromes-Rectus).
4. *By structure*: Nouns, Verbs, Adjectives, Exclamations, Adverbs.

Because of the limited scope of the article, the subject of our study was decided to be Words-Palindromes, which also allowed to make more accurate statistical calculations on the features of the Palindrome part of the vocabulary of English and Chinese. The actual material was “New English-Russian dictionary” by Müller W. K. [9] and “Chinese-Russian dictionary” by Dmitriev S. N. [10].

As for the English language, a total of 160,000 words were studied, of which 178 were Palindromes (0.1%). Among them, Nouns – 69%, Verbs – 20%, Adjectives – 6%, and 5% – other parts of speech (Adverbs, Exclamations and phrases) (see Fig. 1).

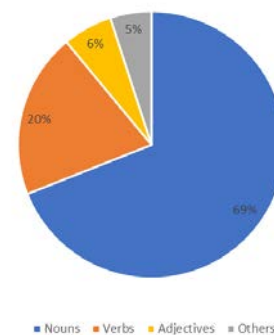
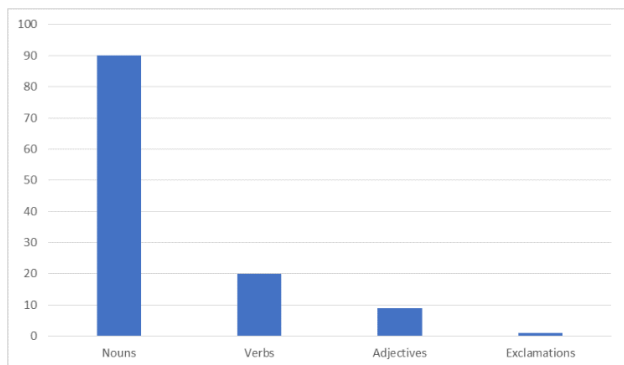


Figure 1. Parts of speech, reflecting Palindromes in English

Made calculations revealed that most of the words when reading in the opposite direction become Nouns (both in the total number (out of 178 Words-Palindromes 118 became Nouns (66%) and in a separate analysis of parts of speech (except for Exclamations, where almost all turned into Exclamations – 3 out of 4)). The most common initial form of the English palindrome was the Noun.  $\frac{3}{4}$  from Nouns-Palindromes when read in the opposite direction remained Nouns.

For example: bag – gab, boob – boob, fool – loof (the last example is the only case of conversion into another word, but a synonym) etc.



**Figure 2. The transformation forms of Palindromes in the English language**

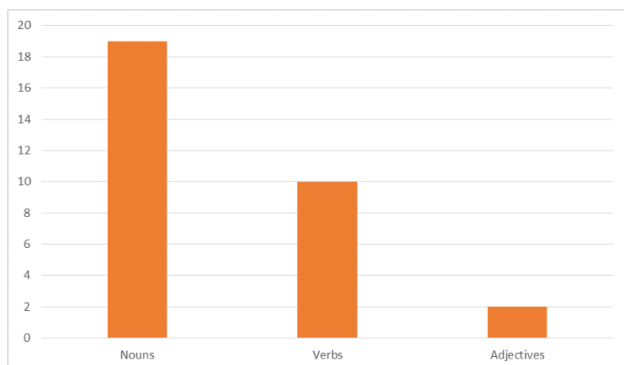
As we can see from Fig. 2, the second in number of transformations is the Verb.

*For example:* pig – gip, teg – get, yap – pay, etc.

The Adjective is the third.

*For example:* dam – mad, gib – big, war – raw, etc.

The analysis of reverse transformations of Verb Palindromes, shown in Fig. 3 shows the dominance of transitions from Verbs to Nouns, less often to Verbs and Adjectives (see Fig. 3).



**Figure 3. The English Verb-Palindromes transformations**

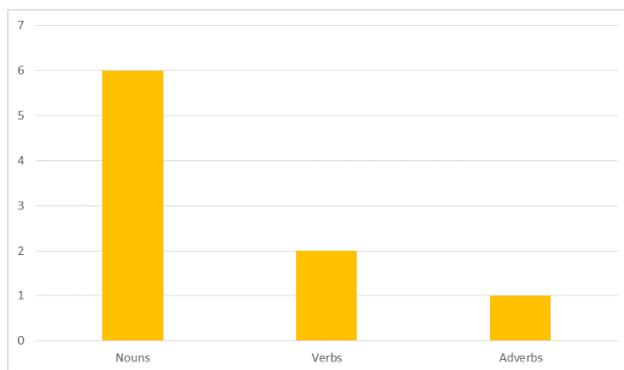
The transition of the Adjective to other parts of speech during the reverse reading of the Palindrome is presented in Fig. 4 and demonstrates the presence of a Noun dominant (see Fig. 4).

*Example:*

transformation into a Noun: mad – dam, new – wen, sad – das;

transformation into a Verb: bad – dab, wet – tew;

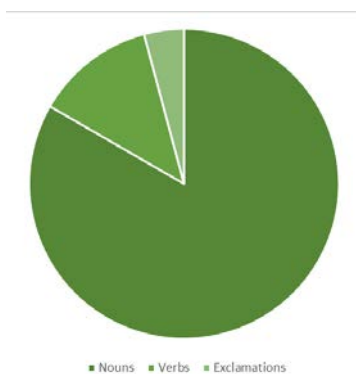
transformation into an Adverb: dim – mid.



**Figure 4. The English Adjective-Palindromes transformations**

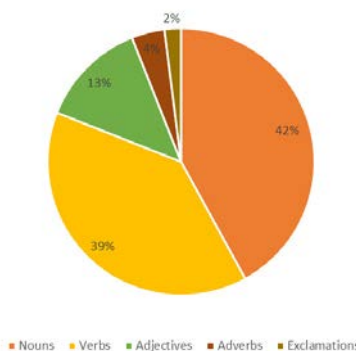
Analysis of Adverbial transformations showed that the initial form of Adverbs was always transformed into a Noun (*ex.*: even – neve, far – raff, not – ton); while Exclamations (*ex.*: ah – ha, aha – aha, hah – hah) remained in their original form. Two Palindrome phrases were also found in the dictionary: deed poll – lopped (turned into a Verb), wet bob – bob tew (phrase – into a phrase).

Defining absolute Palindromes (see Fig. 5), it was determined that their percentage is quite insignificant (13.4% of all Words-Palindromes). Most of them were Nouns – 83% (*ex.*: keek, level, pup, etc.), Verbs – 9% (*ex.*: deed, eke, refer) and Exclamations – 7% (*ex.*: aha – aha, hah – hah).



**Figure 5. English language absolute Palindromes**

The actual material for the selection of palindromes in Chinese was “Chinese-Russian dictionary” by Dmitriev S. N. [10]. A total of 6952 words were processed. 20753 of which were found to be Palindromes (30%). The analysis of the processed material is given in Fig. 6. shows a similar trend with English Palindromes – the domination of Nouns-Palindromes – 42%, however, in contrast to English, this figure is almost no different from the number of Verbs – 39%. Adjectives account for a much smaller share – 13%, Adverbs – 4%, and Exclamations – 2% (see Fig. 6).



**Figure 6. The Chinese language Palindromes**

When reading the Palindrome back in Chinese, there is an excellent pattern, unlike English Words-Palindrome, which have mostly become nouns regardless of their original form, Chinese Palindromes often turn into the same part of speech. The meanings of the words were mostly synonymous or related. Also, the word was changed to a phrase more often than was revealed in English. Changes in words to phrases were found in the two largest groups: Nouns and Verbs.

Nouns-Palindromes of the Chinese language most often remained within their part of speech – 51% of Nouns

(*ex.*: 爱情, 板板, 笔画), almost the same number of words was formed among Verbs – 22% (*ex.*: 办法, 部分, 化石) and Adjectives – 21% (*ex.*: 安宁, 白斑, 光明). 6% are phrases, most of which are Verbs + Nouns (*ex.*: 癌学, 爱称, 安装) (see Fig. 7).

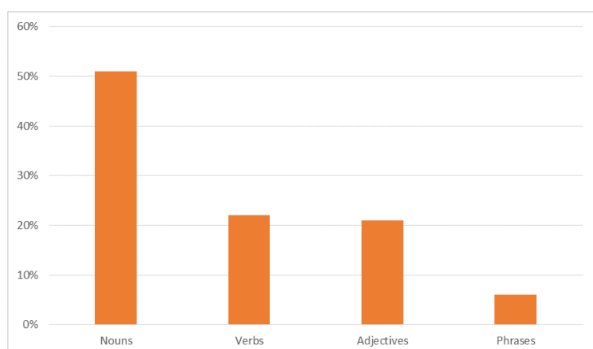


Figure 7. The Chinese Noun-Palindromes

The second in number of Verbs-Palindromes mostly passed to the same part of speech. Which accounted for 66% of Verbs (*ex.*: 抚爱, 办公, 查访), 28% of Verbs (*ex.*: 爱恋, 标定, 航海) were converted into Nouns, and 6% (*ex.*: 案验, 熬夜, 暗恨) – into phrases, where the verb was combined with a Noun or Adverb (see Fig. 8).

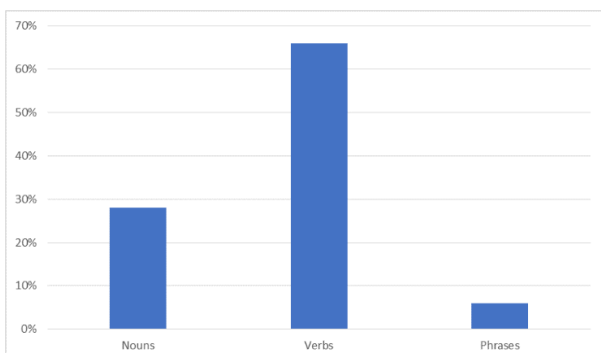


Figure 8. The Chinese Verb-Palindromes

As the Fig. 9 shows, adjectives turned into Adjectives in the largest share – 60% (*ex.*: 皑皑, 敞开, 胆大), as well as in the same percentage of the Noun (*ex.*: 表音, 笔钱, 灰白) and the Verb (*ex.*: 肠断, 畅快, 和缓) – 20% (see Fig. 9).

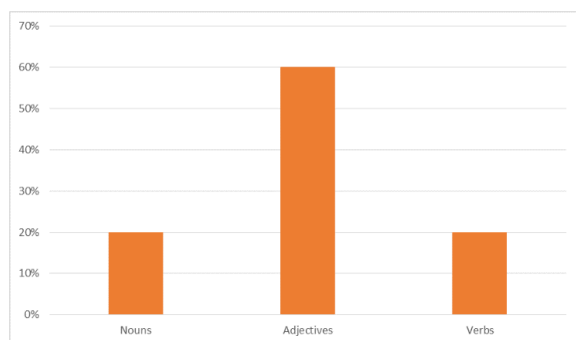


Figure 9. The Chinese language Adjectives-Palindromes

Adverbs-Palindromes, absent in English, were noticed in the Chinese lexicon. All Adverbs in this case either remained Adverbs or became Verbs.

*For example:* 比比, 畅通, 接连, etc.

Exclamations-Palindromes are sound imitations and are represented in a small number (2%). Each time it is a repetitive syllable: 喳喳, 嘎嘎, 呱呱, etc.

Absolute palindromes accounted for only 17% of all, of which Adjectives – 39%, Nouns – 26%, Verbs and Exclamations – 13%, Adverbs – 9%.

#### Conclusions and directions for further research in this area.

Examining the results, we can assume that the main purpose of communication among English-speaking speakers is actually to name objects, not to talk about their characteristics. A similar pattern can be traced in the priority of parts of speech in the grammatical basis of language (a direct line of words in a sentence: *who does, what, where, when...*) and in the relative number of Palindromes in the lexical structure of English.

The part of the Noun and Verb of the Chinese language is much more similar, and the fact that the combination of them arose during the formation of phrases, shows us that the Noun and Verb are equally important in Chinese. It should also be noted that the total percentage of Adjectives is more than half as high as in English, and Adverbs are a separate group among the Chinese Palindromes. That supposes to show that, Chinese speakers pay much more attention to the imagery and characteristics of an object or action. In general, the Chinese language is more prone to the existence and formation of Palindromes, which may have been influenced by their ancient tradition of writing from top to bottom from right to left.

However, statistical analysis of the obtained results makes it possible to clearly demonstrate the advantage of the Noun form of the Palindrome over its other forms, with a slight error towards the Verb inherent in the Chinese language, which has a Verb origin. This tendency may indicate a single supranational feature of language, which at the unconscious level of its speakers distinguishes the dominant nominative function.

#### References:

1. Mohyrova E. What are palindromes exactly? 2018. URL: <https://www.yuqo.com/palindromes-135/> (accessed: 11.11.2021).
2. Каганская Д. Палиндромы в русском и английском языках. 2017. URL: <https://school-science.ru/3/3/31681> (accessed: 11.11.2021).
3. Wikipedia. 回文. URL: <https://zh.wikipedia.org/wiki/回文> (accessed: 13.12.2021).
4. 张宏生. 清代的回文词及其传承与发展 URL: <https://m.aisixiang.com/data/118407.html> (accessed: 14.12.2021).
5. Literary Devices. Definition and Examples of Literary Terms. Palindrome. URL: <https://literarydevices.net/palindrome/> (accessed: 15.12.2021).
6. Wordrow's Palindrome Encyclopedia : encyclopedia / M. S. Donner. New York, 1996. 426 p.
7. Goodies G. Palindromes: monograph. New York : Continuum International Publishing Group, 2015. 308 p.
8. Michaelsen O. Phonetic Palindrome: monograph. New York : Sterling Publishing Co 1998. 213 p.
9. Новый англо-русский словарь : словарь / В. К. Мюллер и др. 8-е изд. Москва : Русский язык, 2001. 880 с.
10. Китайско-русский словарь : словарь / С. Н. Дмитриев и др. Москва : Вече, 2005. 1280 с.

**Білянina В. І., Кур'янінова А. Ю. Слова-паліндроми як прояв наднаціональної ментальності: на прикладі англійської та китайської мов**

**Анотація.** Статтю присвячено розкриттю національно-мовної картини світу англо- та китаємовних народів на базі наявності та розвиненості спільного мовного явища – паліндром. Дослідження розкриває особливості становлення та розвитку даного мовного феномену (спроба визначення первинних та вторинних джерел в обох мовах з подальшим виділенням основних культурно-релігійно обумовлених передумов їх виникнення та існування), його верифікацію (за типами (природна, штучна) та стилями (лінгвістичні, математичні, музичні, технічні)), класифікацію (слова-паліндроми, словосполучення-паліндроми, речення-паліндроми, паліндроми-тексти (псевдо-паліндроми та паліндроми-ректус)), специфіку будови (іменники, дієслова, прикметники, вигуки, прислівники) та перетворень (перехід, пари зворотному читанні, паліндрому з однієї частини мови в іншу) у двох порівнюваних мовах. Наводяться та аналізуються статистично-аналітичні дані механічної вибірки слів-паліндромів зі словників англійської та китайської

мови. Стаття розкриває припущення існування наднаціональної загальномовної картини світу, ґрунтуючись на кореляції отриманих результатів, що демонструє природню близькість світоглядних моделей серед представників аналітичної та синтетичної мовних систем, які підкріплюють первинне сакраментальне значення паліндрома (наділення паліндромів надприродними цілющими та захисними силами, заміщене створенням даних мовних одиниць у якості інтелектуальних вправлянь). Автори розглядають здатність слова-паліндрома, як найменшої форми даного мовного явища, здійснювати трансформації в межах частин мови англійської та китайської мовних систем. У статті розглядається подібність трансформаційних схем з домінуванням іменників над дієсловами, а також вказаної пари над прикметниками, прислівниками та вигуками; водночас, розглядається можливість існування наднаціональної мовної картини світу, через домінування номінативних природних слів-паліндромів властиве обом досліджуваним мовам.

**Ключові слова:** паліндром, слово-паліндром, національна-мовна картина світу, світоглядна модель, мовна система.