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Reasons of the Formation and Development of the Terms of Plant Science in English

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Abstract: ***This article discusses how plant terms began to develop during the period of development of natural sciences, and the reasons for their development, in which Swedish scientist Carl Linney has revealed his maturity in terms of dialectical regularities, while emphasizing the development of plant terms based on metaphysical views.***

Keywords: classification, metaphysical approach, analogy, concept, binary nomenclature, mastered terms, communicative need, morphological category

1. Introduction

As with any field, the knowledge of plant science goes back to the distant past. In the following, we will discuss the first study of plant growing, the developmental period, and the factors that contributed to the development of science during this period.

It is well known to us that humans were originally using plants for food and medicinal purposes and over time, there was a need to distinguish between plants. At the end of the fifteenth and early sixteenth centuries, plant science appeared with illustrations of new species of plants. The characteristic way of understanding nature at that time was a metaphysical approach. It consisted of dividing nature into separate parts, exploring these parts separately, disconnecting events, establishing sharp boundaries between them, and recognizing the study of "objects", not processes. This method was historically inevitable during the evolution of the productive forces at that time. Before embarking on a case study, it was necessary to explore things, understand the confusion of empirical data.

2. Literature Survey

In the Renaissance, research was based on the principle of homogeneity on analogy. On the basis of the relevant external signs and external attributes of the subject, their internal content was determined. This principle is based on the famous doctrine of the distant past - about the external signs of the inner essence. At the beginning of the XVII century the basis of scientific thinking was not the principle of "similarity" but the principle of "identity - difference": internal similarity and internal difference may be obscured by external similarities (Stepanov, 1971). The development of plant science from the Renaissance to the seventeenth century led to a mutually enriching terminology. He helped create a classification of plants by Linney that are of great value in science and which still retain their scientific value to this day.

While the English terminology at the beginning of the emergence of plant science consisted of words such as berry, eye, fruit, lip, seed, throat, from the everyday methodology to the scientific method, the sixteenth-century vocabulary acquired from foreign languages was steadily introduced[1].

At the end of the 16th century, the development of productive forces led to the rapid development of natural science. Microscopic research into the discovery of plant cell structures has accelerated the enrichment of the English language with new "science words" such as: pedicle (1626) (gulband), pedicel (1676) (poya), auricle (1653) (quloqcha), pod (1688) – (ko`sak), etc.

3. Problem Definition

K. Linney's classification was based on previously collected scientific material and helped to easily identify, classify and illustrate new plants in the future. K. Linney in his book “Species Plantarum”, strove to differentiate the varieties of plants and give the seminal titles the most meaning. The name he reformed represented the names of varieties that were synonymous with synonymic names, images, paintings, and critically processed Herbarium samples (Bobrov, 1957). The names of these varieties, which are subordinate to the respective species, are arranged in numerical order in the book, with many of their names being distinguished by the vocabulary. Instead of the cynical names used in the nomenclature of plants in the pictorial plant, K. Linney uses nominally **trivialia** - a phrase that is called ordinary names. A common name is usually a Latin adjective that complements the species name (noun). From the outside it is the simplest case of binary nomenclature, that is, one word for the type name + one word for the name of the species. Although it was previously used by other naturalists, it was a novelty in visual methods (see K. Baugin, N. Hesselgern, and I. Kinnader).

In the English terminology of this period new names of different varieties of fruit appear, for example: drupe (1753) – (qizil maymunjon), legume (1785) – (loviya), follicle (1706) – (yaproqcha), achene (1845) – (don) and so on.

[1](Here and after that, the dates of the vocabulary are given based on T.Severyv's Science Language, for example: parietal (1506) - parietal, wall-hanging, alga (1551) - algae, pollen (1523) - pollen, genus (1551) - turva (TH Savory. The Language of Science. Lnd. 1953):

4. Methodology / Approach

Further development of science has fueled the need for a successful relationship between scientists. The communication process involving the transfer of understanding and intellectual content, the expression of a state of mind, can only be accomplished through the language of the words. K. Linney's classification of plants is not only a major contributor to language development, but it has also helped scientists understand each other more effectively. The principle of its organization allowed the use of adjectives to describe the various parts and organs of plants. Their lack of common English has led to a shift from everyday and artistic methods, as well as from other languages to the scientific way of speaking. Compare, for example, adventures: apetalous (1706) – (gulbargsiz), peltate (1760) – (qalqonsimon), and later: napiform (1846) – (sholg`omsimon), baccate (1830) – (mevasimon).

When scientists understood that plants are a living organism, which life processes evolve under certain laws, scientific terminology has emerged from the following words: photosynthesis (1804), phylloclade (1858), chlorophyll (1875) saprophytes.

The plant's vocabulary is filled with words to describe not only the flowering plants but also the hawks, mosses, fungi, for example: mycellium (1836) lodicules (1864), sporangium (1836), coleorhiza (1866).

The process of the language system's influence on non-language factors is particularly evident in the vocabulary. With the development of production, science and culture, the qualitative and quantitative composition of the dictionary will also change.

5. Results & Discussion

The qualitative and quantitative structure of the nucleus of the terminology of the scientific method of the plant growing vocabulary analyzed is an example. The core part of the terminology that emerged from the sampling was presented by two morphological categories (nouns and adjectives), in addition the subjective terms prevailed in numerical terms. This may be attributed to the fact that more words were needed in the categorical meaning of the sign than in the subjective categorical meaning, both to form the systematic nature of the plants and to describe the individual plant or its components.

During the Norman occupation, the influx of Latinos increased. Many of the Latin words into English (especially the terms science and art) were borrowed by the Romans from ancient Greek. Latin names of trees, plants, and herbs were introduced into ancient English at the same time, for example[2]: **rose** (<L rosa <Gk rhodon), **lily** (<L lilium <Gk leirion), **box-tree, box,** (<L buxus <Gk puxos), **plant** (<L planta).

Most of the terms originating from the Greek language apply to various fields of science, including botany, for example:

botany (<Gk botanikos), spore (<Gk spore),

petal (<Gk petalon), etc.

Words derived from Greek and Latin are almost always internationally and comprised of literary, scientific, and vocabulary, which are divided into three categories: nouns, adjectives, and verbs. Examples include:

chlorophyl (<Gk chloros + phyllon), sryhtogamous (<Gk crypros + gamos), rarasite (<Gk parasitos), (<L capsula).

In the sixteenth century, the **crown** (<OF corone <L corona) was introduced from French to English literary language, which later switched from everyday speech to scientific method and acquired terminological paint. The word **herb** (<OF color <L colorem) is a rich, **hardy** (<F letter) resistant, steady, unchanging, permanent, word-of-mouth color (<OF color <L colorem) along with words that represent concepts in food (spice). The natural words **naturel** (<L naturalis) have long been used in plant science literature. Although the influence of French on English in the second half of the 16th century was particularly strong, this period was characterized by a gradual withdrawal of the French language from the relationship and the spread of English in social activities and science.

6. Conclusion

Thus, the history of science development is inextricably linked to the history of the development of society and the semiotic means used to record, store and transmit scientific information. The modern English plant growing terminology is a vivid example of a system of terms created by a broad stream of assimilation from other European and classical languages on the basis of the main language of the national language. The qualitative analysis of the terms we have chosen shows that the terminological vocabulary of the plant growing dictionary consists of a conglomerate of words from various etymological sources. It includes words from German, Latin, Greek, and French.

7. Future Scope

From the foregoing, it is clear that the words of the Latin language, the language of science, which form the terminology of the plant, are the majority. In this period, plant science coincides with the beginning of metaphysical views. The emergence of new words based on the development of science and technology and their proper

[2]Here and hereafter the following abbreviations are used to describe the etymology of the word:
OE, Old English - Old-English
ME, Middle English - Middle English
OF, Old French - Old-French
L, Latin - Latin
Gr, Greek - Greek
ON, Old Norse - Old - Scandinavian
Du, Dutch - dutch
Aryan - German

use met the communicative need. Although Linney did not abandon his metaphysical views, his theory of internal similarities and differences in plants and animals helped to easily identify, classify, and describe new plants in the future.

References

[1] Stepanov Yu.S. Semiotics. M., 1971, 168 pp.
[2] Savory T. The language of science. London, 1953.
[3] Bobrov E.G. Linney, his life and works. USSR Academy of Sciences, 1957. 217 p