

REVIEW
by Assoc. Prof. Dr. Pavlina Grigorova Kancheva,
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of dissertation work
for obtaining a scientific and educational degree "Doctor"

in the direction of 2.1. Philology.
General and Comparative Linguistics
(Comparative Analysis of English and Russian Medical Terminology)

Topic: MAIN TRENDS IN THE TERMINOLOGICAL SYSTEMS OF
DENTAL MEDICINE AND CRANIO-MAXILLOFACIAL SURGERY
(ON ENGLISH AND RUSSIAN MATERIALS)

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1. Doctoral data.

By order № RD 20-1370 / 17.09. 2020 Svetlana Yordanova Taneva is included in a doctoral program in independent training in a professional field 2.1. Philology, doctoral program "*General and Comparative Linguistics*" (*a comparative analysis of English and Russian medical terminology*) at the Department of English and American Studies, from 25.09.2020 to 25.09.2023 with supervisor Assoc. Prof. Dr. Alexandra Bozhidarova Bagasheva. By order № RD-20-1786 / 20.09. 2021 Svetlana Yordanova Taneva is written off from the doctoral program with the right to defense. The scientific jury and the date of the defense were approved by order № RD 38-465 of 27.09 2021. At its first meeting, held on October 7, 2021, the members of the scientific jury concluded that Svetlana Taneva exceeded the minimum national requirements by at least 30 points, counting 50 points. After getting acquainted with the presented report on the lack of plagiarism, the members of the scientific jury decided on the lack of such in the dissertation. The data presented in this way show that all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria have been met and no violations have been committed.

2. Data for the dissertation.

The dissertation consists of 316 pages, of which 232 pages - a monographic part consisting of an introduction, three chapters and a conclusion, 66 pages - appendices, bibliography - with 237 literature sources, illustrative part - 33 figures, 11 tables and 5 diagrams , a list of selected publications of the PhD student on the topic of the dissertation.

In the *Introduction* the PhD student. Mrs. Svetlana Taneva, presents clearly and sufficiently comprehensively the obligatory components of the dissertation. The ideological orientation of the research towards cognitive linguistics and the consideration of the terminological metaphor through the prism of anthropocentrism is stated. The theory of terminological nomination, the theory of structural and cognitive semantics and the theory of cognitive linguistics have been adopted as a broad theoretical basis of the work. The object of study is English terminology of Dental medicine (DM) and Cranio-maxillofacial surgery (CMS). Russian terms from these medical fields are also included as a comparative material. As far as I know, this scientific object has not been studied so far. The subject of research is the role of the metaphorization, etymology, structure and synonymy for representing specialized knowledge in DM and CMS. The aim of dissertation is to describe the specifics and ways of expressing and systematizing specialized knowledge in English terminological systems. The tasks for achieving the aim (8 in number) and the research hypothesis are clearly formulated. The material of the research is presented. The methods applied for solving the tasks of dissertation are also indicated - definition analysis, cognitive analysis, component analysis, etymological analysis, survey method, statistical methods. The author gives a detailed view of the benefits of science from her work and briefly presents the content of the individual parts of the dissertation.

In the *First Chapter* Sv. Taneva publishes the literature review of the study. The theoretical foundations of the dissertation and the views of the PhD student are presented in detail and in depth. Taneva presents the nominative theory through the prism of cognitology and as an intersection with onomasiology and word formation and notes the overlap of the research areas of these sciences.

Taneva dwells in detail on the nature and mechanisms of linguistic nomination. The doctoral student focuses on its consideration as a special

speech-thinking process in view of the communicative needs. The goals of the nominative theory today are also indicated – detection of regularities of conceptualization and categorization of the human experience in the process of establishing names in the language systems of the different languages.

Based on the Bulgarian and Russian linguistics and in particular on research on the Bulgarian medical literature, the doctoral student dwells on the issue of choosing a nominative feature leading to the language nomination and considers it as one of the most important aspects of the national originality of linguistic semantics.

Taneva makes the correct statement that the basic principles of language nomination are inherent in the terminological nomination, but the specificity of the term leaves its mark on the terminological nomination not only functionally but also structurally (p. 22).

Taneva presents her theoretical summaries on a number of key issues. The term "specialized language" is presented in depth in terms of its origin, distribution in various national sciences, terminological variance and definition. Taneva successfully displays the features of the specialized language. Following the ideas of A.V. Superanskaya and co-authors (2012) on comparing the vocabulary of specialized languages and literary language, the doctoral student is of the opinion (with which we can agree) that specialized languages are in constant interaction with the common language and the boundary between the specialized and non-specialized vocabulary turns out to be quite mobile (p.27). Taneva is considering a possible classification of specialized languages in the field of medicine - an interdisciplinary problem that awaits its solution in the future.

Taneva clarifies the concept of "term" in specialized language from a cognitive point of view. She formed this view on the basis of Russian linguistics - the works of E.S. Kubryakova (2002, 2004). From the Bulgarian school of terminology she adopts the theoretical formulations of the term in the works of Manolova (1994). Kancheva (2009), Stankova (2009), Dimitrov (2008) and a complex approach to the term set by M. Popova (1985).

Taking into account the definitions of many researchers on the conceptual structure, the author develops her thesis that the term is a unit that plays a specific role in the process of acquiring knowledge through communication,

relying on the existence of common concepts as common semantic components in the conceptual systems of the participants in communication.

The PhD student also refers to the question of the connection of the term with the concept in its hotly debated part regarding the differentiation of specialized and non-specialized concepts in the meaning of the word. Here she refers to Apresyan (1974) and Shelov (1998). Regarding the refinement of the PhD student's personal comment on the issue, I recommend the use of the criteria: "presence of a definition" (for specialized terms) or "presence of lexical meaning" (for words from the common language).

Following the cognitive approach to the term as structures of diverse knowledge, in accordance with the ideas of Bulgarian scientists (Alexiev, 2004 Stankova, 2009), the PhD student came up with the innovative idea of creating a cognitive map of medical science representing scientific knowledge in terminology. Its essence is a set of frameworks that reflect certain scenarios of medical practice, including a different format of knowledge.

Taneva examines the issues of the nature and development of cognitive linguistics, clarifying its basic concepts. The terms "concept", "conceptual system" or "conceptual model of the world" and "linguistic picture of the world" are clarified in depth by presenting the ideas in Russian linguistics, addressing the issues of their origin, development and essence.

Taneva focuses on the terms in cognitive linguistics, denoting ways of organizing knowledge, and states the use in the dissertation of the methods of the theory of mental spaces and conceptual integration. The ideas of Turner and Fakonie (1998a, 2003), Boldirev (2001), Irishanova (2001) and others are presented as a development of this direction. Taneva successfully explains the processes of interaction and conceptual integration of mental spaces in the formation of metaphorical terminology and illustrates this theory through in-depth analyzes of terminological metaphors in the terminologies of DM and CMS illustrated by figurative images of successfully selected and very interesting examples (pp. 49-52).

The *Second chapter* is dedicated to metaphor as a means of terminological nomination. In section 2.1. the PhD student presents the theory of conceptual metaphor and shows a preference for the study of metaphor in cognitive, communicative and psychological aspect. Her focus is on the cognitive theories of the metaphor of McCormack (1985), Arutyunova (1990, 1998 a, b, c), Telia

(1988b, 1996) and others. The PhD student skillfully redirects the theoretical formulations of the conceptual metaphor to the metaphorical meanings of the terminological units in the field of medicine and, quoting Novodranova and Aleksieva (2000), points out the motivating features based on perceptions of similarity, which most often turn out to be the basis of medical metaphor - similarity in shape, color, consistency, external signs of animals, function. In this part the PhD student presents interesting examples of conceptual metaphors with the realization of one or another of the indicated motivating features which reflect whole cultural-specific mental models. The PhD student presents in detail the cognitive theory of metaphor based on the fundamental work on this topic by J. Lakoff and M. Johnson (1980). The understanding that metaphorization is based on the interaction between two structures of knowledge - the cognitive structure of the "source" (source domain) and the cognitive structure of the "target" (target domain) is basic for the dissertation. Based on it, the doctoral student defines the understanding of "conceptual metaphors" as sustainable interactions between the source and target areas, fixed in the linguistic and cultural tradition of a society which can form coherent conceptual structures in the form of "cognitive models". Further, Taneva discusses in detail the issue of metonymy and cases of interaction between metaphor and metonymy in the language of academic medicine, citing Bulgarian linguistic research (Kancheva: 2009,2011, Pacheva-Karabova: 2005) and presents in detail the ideas of M. Popova (2012) for terminological metonymy. In a detailed and in-depth review of theories and ideas metaphor is presented as a "hidden comparison", as an "analogy" as a "way to create a linguistic picture of the world" as "one of the forms of conceptualization without which it is impossible to express and form new concepts and gain new knowledge ”

In section 2.2 dedicated to a metaphorical cognitive model of terminology the PhD student discusses the mechanisms of formation and the essence of the terminological metaphor presented from different points of view in the works of a large number of scientists. Taneva focuses on the analysis of the terminological environment of the metaphorical term and on this basis considers the process of metaphorization as the transmission or transfer of knowledge from the source domain to the target domain and as a reflection of the cognitive space of the source in the cognitive space on purpose.

The PhD student commented on the definitions of the terms "cognitive metaphor" and "conventional metaphor" referring the latter term to the

structural-conceptual metaphors in system of G. Lakoff and M. Johnson (1980, 1993). The PhD student reviews a number of cognitive theories about the creation of metaphors. Citing Turner and Fauconnier (1998a) and others, she points out different mechanisms for creation: similarity, conceptual blending, mapping by analogy, transmission, projection, association and borrowing, conceptual integration. Taneva pays great attention to the contributions of Bulgarian linguists on the mechanisms of formation and classification of terminological metaphors on the basis of motivating features in the works of M. Popova, B. Aleksiev, P. Kancheva, N. Nikolova and others.

The PhD student considers metaphorization as one of the lexical-semantic term-forming ways – a theory developed most clearly in Bulgarian terminology by M. Popova (2012) whose work she quotes in detail emphasizing the main characteristics of the metaphor and the separation of the so-called Popov's identifying metaphor and sign metaphor. Taneva also quotes extensively B. Alexiev, who interprets the mechanism of metaphorization combining the conceptual theory of terminology and the conceptual theory of experimentalism and distinguishes two types of terminological metaphors – conventional and unconventional.

Based on the literature, Taneva presents her conclusions that metaphor should be considered not only as a linguistic, but rather as a conceptual phenomenon and in connection with its complexity and multi-layeredness states the use of a set of methods for analyzing metaphorical design in English terminological systems of DM and CMS.

In section 2.3. Taneva aims to clarify on the basis of medical terminological materials how national terminological systems are formed and what is the ratio of Greek-Latin and national layers in them. This is a topic that is somewhat undeveloped and awaits research. The PhD student presents her view on the ancient heritage in the European terminological systems and the influence of the Greek and Latin languages on the construction of the English metaphorical terminology system. In this part of the work, based on different European languages, Taneva presents her own observations and analyzes, which are characterized by philological competence and depth. In her reflections on the historically established lexical layers in the terminological systems the PhD student arrives at the productive idea of stratification in the terminological system which imposes the need to study the relationship and interaction between the individual layers of terminological vocabulary. This idea successfully

presented through description and figure is original and promising as it gives room for further research. At the same time I cannot agree with the PhD student that the reason for the derivational advantage of the Greco-Latin terminological elements over the morphemes of the national languages is embedded in the system of the classical languages. In my opinion, the factor of tradition and historically created public prestige of the classical languages as basic for the construction of scientific terminology should be taken into account here.

Taneva dwells on the international layer of terms formed on the basis of ancient Greek and Latin elements, and defines it as particularly relevant in medical terminology.

Taneva also considers synonymy as part of the metaphorical term-forming model explaining that in the process of nomination the specialist chooses a new word to denote an already known concept which he considers in a new aspect. This is a look at the debatable question of synonymy in terminology which is subject to clarification. The PhD student's insightful idea of synonyms in terminology as active means of fixing new views on the subject of thought and synonymy as a sign of the developing science is impressive.

Following Danilenko (1971) and Grinev (1993), the PhD student dwells on the definitions of synonyms as variants. Based on extensive illustrative material from the medical literature Taneva successfully classifies and comments on two types of synonyms: equivalent and interpretive.

The *Third chapter* is dedicated to the empirical research of the object of the dissertation, but before their presentation (in section 3.1.), Taneva focuses on the languages whose terminological systems are included in the dissertation. English and Russian are characterized as part of the international medical terminological foundation and as mediating languages at the professional level and mediators between the classics and the modern. Taneva launches and brings arguments to the discussion idea of an equal position of the English and Latin medical vocabulary in the international arena (p.105).

The PhD student outlines through historical references the term formation processes and the current state of English, Russian and Bulgarian medical terminology and indicates how they are included in the study - English – as the leading for the study, Russian and Bulgarian - as translation equivalents of the studied English metaphorical units. The author's summary is that all three national languages – English, Russian and Bulgarian – have a full arsenal of

resources and ways to form terminological vocabulary that duplicates Greek-Latin, and techniques for borrowing Latin and Greek terms.

In section 3.2. Taneva presents the specifics of the terminology of DM and CMS. Since the objects and subjectivity of a given science predetermine the conceptual specificity of the terms the doctoral student quite rightly presents the boundaries of the scientific fields whose terminology is the subject of research. She gives the definition of the term "dental medicine". Each of the four sections of this applied biomedical science is presented with its thematic content. The PhD student presents data on the thematic scientific and practical scope of the specialty CMS but there is an impression of shortness of information about this medical field as well as on the issue of the relationship between DM and CMS.

Taneva presents the models and mechanisms for modeling of the metaphorical terms in the body of DM and CMS. The classification is presented visually and extremely informatively through a table which covers the empirical material of the dissertation with data for each metaphorical model and its reference basic components, examples in three languages and general quantitative indicators. The PhD student presents her in-depth analyzes of numerous examples for each metaphorical model, which prove the existence of specific cognitive strategies of metaphorization as a manifestation of systematization in the formation of terminology in the field of DM and CMS.

Taneva conducts an innovative field research on "Conceptual blending through the cognitive prism of DM students", based on the theory of conceptual integration of Fauconnier and Turner. The PhD student conscientiously presents information about the field research which verifies its results. Of interest and scientific contribution are the research steps of the field research which the PhD student describes in detail. It is about entering the essence of the extremely complex for observation and research intimate processes of formation, movement and combination of mental spaces based on associative thinking which the PhD student was able to outline through detailed analysis and quantitative presentation of rich empirical material. As a direct result of this study the conclusion about the motivation of the terminological nomination in medicine (a question posed by many scientists), presented by Taneva as a ranking of motivating nominative features, in which the first two places are ranked signs "form" and "function ". These are the results that have been reached by other researchers of medical terminology but the contribution here is that these results are statistically verified. The PhD student draws conclusions

about the existence of metaphorical conceptual blending in the formation of the considered terms which is based largely on expressions and words from the common language and based on the specifics of the material explains its essence.

Taneva links the results of the field research with the next analysis of the English language corpus in the dissertation. At the center of her attention is the question of the structure and differentiation of structural-syntactic models of English-language metaphorical terms in the corpus of DM and CMS. Taneva is interested in this issue in connection with the regularity of the linguistic design of metaphorical terms, which is evidence of their systematic nature, and aims to prove that they are built in accordance with the established in English structural-syntactic models. The PhD student presents her methodology for structural-syntactic classification of metaphorical terms according to the type and number of components in the composition of the separate models. The analyzes of the models are detailed and accompanied by statistical data. Such analyzes and their conclusions are very valuable for establishing the norm in term formation and the resulting possibilities for standardization of the respective terms.

The following study focuses on the etymology and differentiation of etymological models of English-language metaphorical terms based on 400 excerpted terms from a specialized bilingual Russian-English and English-Russian dictionary (Novodranova 2007). The etymological analysis is presented visually and with quantitative characteristics in a figure and diagram and through comments as its conclusions are for the presence of four groups (original models, hybrid models, borrowings from classical languages, borrowings from other languages) which are also subdivide. Following the conclusion about the heterogeneous nature of the etymology of terms in DM and CMS Taneva traces in detail the hybridity in the formation of metaphorical terms discussing all possible options for interaction between English classical languages and other European languages. As a result of this study the doctoral student concluded that the etymological composition of the metaphorical units in DM and CMS is heterogeneous and heterochronological.

On the occasion of this part of the dissertation, I suggest that the doctoral student consider replacing the terms "borrowings from classical languages", respectively "Greek borrowings" and "Latin borrowings" with others. The process of "borrowing of terms" is known to take place as a result of the cultural interaction between living mainly European languages during the period of

building the relevant scientific terminology systems. The classical languages – Greek and Latin – are known to be sources of elements, words and word-formation patterns which underlie a large number of terms traditionally accepted in a number of national terminologies which in turn can be borrowed from other national specialized languages. This means that classical languages are not sources of borrowing but sources of fundamental elements that are disseminated indirectly.

Taneva presents a study of excerpted material of terminological synonymy and the formation of synonymous lines in the English-language metaphorical corpus of DM and CMS. The PhD student refers to the theoretical formulations of lexical synonymy in Bulgarian linguistics with the respective definition and differentiation of full synonyms and partial synonyms. The explanation of terminological synonymy in medical discourse is acceptable – these are cases in which the concept of the same medical object is named differently or are the result of the terminologist's desire to present the medical object through native language resources according to the parameters of the scientific term. Taneva outlines the process of creating synonymous neologisms as a result of neonomination in terminological corpora of relatively new interdisciplinary sciences such as DM and CMS. As expected the quantitative results of this study indicate a high percentage of terminological synonymy and synonymous lines with a length of two to six terms with cases of terminological variants being presented. Taneva commented on these results quite satisfactorily addressing the issue of the contradictory nature of terminological synonymy in medical discourse and its placing under control through standardization and application of the "archiving" technique described in Bulgarian terminology.

Summaries, Conclusions and Contributions. Each of the three chapters ends with a summary of the main theses and conclusions in the respective chapter presented in a synthesized, clear and comprehensive manner. At the end of the dissertation Taneva gives her general conclusions on all issues and presents the contributions to science of her dissertation.

3. The Abstract of 53 pages accurately reflects the content and conclusions of the dissertation.

4. The publications attached to the dissertation are related to the topic of the dissertation.

In conclusion:

1. The dissertation of Svetlana Yordanova Taneva has a contribution character, determined by the choice of an unexplored scientific object. In this regard, I accept all the contributions made by the PhD student. I confirm that the dissertation is a significant contribution to the study of medical terminology with applications in the teaching process in English, Russian and Bulgarian, translation of medical literature and in terms of terminological standardization in the field of DM and CMS.

2. The key concepts for presenting the theses in the dissertation are based on a large number of theoretical English, Russian and Bulgarian works which the doctoral student knows, quotes and skillfully interprets.

3. In-depth and competent multidirectional linguistic studies of the material have been made which from different points of view clarify the scientific object and in their entirety present the essence of the studied English-language terminological systems.

4. The reasoning and conclusions are richly illustrated through clear and informative figures and tables.

5. The innovative nature of the dissertation should be noted in relation to the application of original research techniques, overlapping of discussion questions and proposing ideas for future resolution.

6. The dissertation is completed in accordance with the requirements for this type of scientific work with good style in clear Bulgarian language.

7. In the event that in the future Mrs. Svetlana Taneva maintains her research interest in the same scientific object, I recommend that she turn her attention to the issues of terminological standardization and codification in the field of DM and CMS .

Based on all the above, I am convinced that the dissertation and the attached materials meet the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria and have all the necessary qualities to award the educational and scientific degree "Doctor" of Svetlana Yordanova Taneva.

December 9, 2021.

Respectfully yours,

(Assoc. Prof. Pavlina Grigorova Kancheva, Ph.D.)