

Implicit multivariate terms of the German medical language and their Polish equivalents on the example of textbooks for operating personnel.

Contrasting and comparative analysis

Summary

Specialised languages are a particular variation of each national language. Although they are based on the same grammatical rules and basic lexical system, the uniqueness and specificity of each specialised language is undeniable and results from the characteristic terminology used in communication among specialists or in the exchange of information between experts and persons from outside the circles of experts in a given field. Depending on the participants in the communication, the degree of professionalism of the means of expression used in the specialised language varies. The highest degree of professional communication is thus characterised by the complexity of the specialist nomenclature.

The above considerations also apply to the language of medicine and the language used within its individual sub-disciplines, which, as separate fields of medical science, show specific features of language use.

This dissertation deals with the study of the phenomenon of the complexity of medical terms used in surgery as part of communication among surgical staff.

The analysis covers those terms that are characterized by the highest degree of complexity of their structure and thus carry a very large amount of information, while retaining the features of a single - albeit very complicated - word on the surface of the text. Such specialized expressions have been called the concept of implicit complex terms and are the main subject of the research presented in the following paragraphs. in this doctoral thesis.

The theoretical basis of the linguistic research carried out is primarily the latest news from the world of specialist languages, with particular emphasis on the history and state of medical language research. In the dissertation there will also be references to the theory of word-forming and translation, because each of these two linguistic disciplines presents an important knowledge of the language system: Word formation explains the structure and structure of lexemes as the basic units of any language and offers the possibility of creating new words using a variety of methods and language materials. Translation, on the other hand, presents numerous strategies for reproducing the means of expression of one language with the

appropriate units of another language system. Nowadays, when many specialists develop their professional careers not in their home country but abroad, the issue of translating specialist texts seems to be very important. The exchange of expertise between experts from different language areas is very evident in the impact of foreign languages on medical terminology, where more and more names borrowed from languages other than the native language are appearing.

This thesis consists of two main parts: theoretical and empirical. The first part - theoretical - includes 6 chapters, in which theoretical assumptions of dissertation and references to relevant fields of linguistics are presented.

In the first chapter the basic issues of word formation are described. First of all, the definition and main subject of word formation is explained. Next, the rules and word-formation formants are presented, as well as the classification of lexemes due to their structure on the basis of word-formation means used in their construction.

The second chapter provides an overview of the most important theoretical considerations for the study of specialist languages in relation to research carried out in Germany. The subject matter and the latest state of research in the field of specialised languages are presented. It also attempts to identify the most appropriate definition of a specialised language, taking into account all its aspects, and presents theories of how to classify specialised languages according to different categories of division.

The third chapter presents the division of professional languages into different types of pragma- and sociolinguistic languages. Special attention has been paid to the linguistic characteristics of the specialist language, with the main focus on its lexical features. The lexemes that are characterized by the highest degree of structural complexity are mainly those that are German complexes and abbreviations that can be defined as implicit complex terms from a morphological and semantic point of view.

In the fourth chapter of the following chapter, the language of medicine is described separately as one of the following from variants of the specialised language which, in a broader perspective, is the main subject of this dissertation. The historical outline and current state of research on this language is outlined, but above all its lexical specification is presented, both morphologically, etymologically and semantically.

Since the use of language is inextricably linked to the act of communication, this issue is also addressed in this paper. The fifth chapter explains the definition of communication itself and

describes the most important types of communication and media used in indirect communication.

Special attention is paid to the aspects of specialist communication, presenting the characteristics of the communication process depending on the competence of the participants in the field of a given profession. The main features of the functional style used in specialist texts and the types of texts used in professional communication are given, in particular the following in the medical literature.

Since today people all over the world live in a global village and communicate with each other in various languages, translation is becoming increasingly important also in the case of specialist communication. Therefore, at the end of the theoretical discussion, in the sixth chapter, the most important issues concerning translation are discussed. To begin with, the terminological diversity of the concept of translation is presented. It then describes the types as well as the numerous translation techniques and, finally, the problems faced by specialist translators.

Referring to theoretical considerations in the empirical part of this doctoral thesis, a linguistic analysis of two textbooks for operating personnel was carried out: the German textbook "Klinikleitfaden OP-Pflege" by Gertraud Luce-Wunderle and its Polish edition "Nursing Operations". Language phenomena (more precisely: lexical) occurring in both copies of the textbook under study were analyzed on the basis of a contrasting and comparative method, taking as a starting point the German-language publication. The subject of the analysis are such word-forming structures as complexes and abbreviations and their mixed forms, i.e. German implicit complex terms studied morphologically and semantically. Out of the numerous assemblies, the examples of assemblies that show the highest degree of comprehensiveness among medical terms were selected as representative. However, in the case of abbreviations, special attention was paid to those that exhibit features of internationalism. They were analyzed in terms of their structure and assigned to semantic categories of medical nomenclature.

The implicit terms consisting of the German textbook were then compared with the corresponding meaningful Polish specialist terms, which most often have the form of nominal phrases, but rarely come down to individual words. On the basis of the results of this comparison, the translation strategies that are perceived as the most adequate in the translation of the mentioned implicit complex terms were discussed.

The combination of specialist terms from two analysed sources proves the great diversity and complexity of the surgical language of medicine, which is rich in implicit complex terms with different structures. In German, these are often complex compositions and abbreviations. It can be observed that the largest morphological group of implicit complex terms is composed of complex compositions, the majority of which are written together, the Polish equivalents of which are usually in the form of "one-to-one" equivalents. (*Eins-zu-eins-Äquivalente*). However, in the case of translation of many terms, there is a lexical change of structure (*lexikalischer Strukturwechsel*), consisting in supplementing the Polish nominal phrases with additional conjunctions indicating the purpose of specific surgical instruments or the location of the surgery site. On the other hand, a change within a given grammatical category is rarely used and is limited only in some cases to the replacement of a plural with a single term or vice versa.

Apart from the "one-to-one" equivalents, many Polish nominal phrases show a greater use of language means than the German implicit complex terms, which they are equivalents of. This is indicated by the fact that these are most often expressions, paraphrases and analogies. Thanks to the use of such translation strategies, it is possible to achieve a high degree of precision in naming the denotations of extra-linguistic (in this case surgical) reality.

However, the Polish implications of German compositions are not so frequent.

Contrary to the applications, they are characterized by a linguistic saving and generalization of meaning, although in some cases, despite significant differences visible on the lexical surface, the total semantic equivalence is maintained. It should be noted, however, that the implication of simple lexemes in the Polish medical nomenclature means that they can no longer be classified as implicit complex terms.

Analyzing all German compositions and their Polish equivalents, it can be observed that in German the foreign language material has a greater part in the specialist surgical nomenclature. In Polish, elements of foreign origin are often replaced by native lexemes, sometimes commonly used, which gives the impression that German surgical terminology shows a higher level of expertise.

However, it is specific for Polish equivalents of German liaison compositions (*Bindestrich-Komposita*) to keep their own names - the names of inventors of certain surgical techniques and instruments and the names of producers - in their original wording or with the use of appropriate language adaptation strategies. Many complexes of such structure are the same

eponyms and retain their eponymic character also in Polish nomenclature. Characteristic of this morphological group of implicit complex terms is also the high frequency of occurrence of digits, single letters or chemical determinations as direct elements of assembly (*unmittelbare Konstituente*). The use of digits in terminology is primarily used to determine the size or variant of appropriate instruments and tools that should be used during specific surgical procedures. In the translation of names with the use of such terms, however, some discrepancies arise, which result in differences in the standards of surgical practice and the realities of the language area in question.

From the formal point of view, the abbreviations which in both editions of the analysed textbook sound identical are more homogeneous, because most of the terms of this type are internationalisms. In many places, both in German and German and in the Polish edition is given their full form in the original English version or constituting its translation in the native language. Apart from internationalism, there are also abbreviations which are used only in German and do not have any corresponding abbreviations in Polish. All other equivalents are obtained by translating the individual words in accordance with the corresponding letters or syllables of the respective abbreviation (*Glied-für-Glied-Übersetzung*), lexical substitution (*lexikalische Ersetzung*) or paraphrasing (*Paraphrasierung*). Some of them in Polish have the form of simple lexemes, so they cannot be called implicit complex terms. Generally speaking, it can be noted that there are more abbreviations in the German edition of the manual than in the Polish version. On the one hand, this phenomenon may be conditioned by differences in extra-language reality, as these abbreviations are particularly often used in German as names of medical legal regulations or organisations that do not function in Poland. On the other hand, using abbreviations in German instead of full names as often as possible can be interpreted as a sign of language economy.

Apart from the implicit complex terms, which sound the same or very similar in both languages, and which are consistently used in the same form in every textbook analysed, there are also terms in both German and Polish that have their own synonymic substitutes with a different structure on the surface of the text. Two constellations most often appear: on the one hand, the German nomenclature uses many synonyms for the same term, which does not have any synonyms in Polish, and on the other hand, there are two or more synonyms in Polish medical terminology for the same German term.

Some tendencies can also be seen in the semantic plane of implicit complex terms used in the language of surgery. The analysis showed which semantic groups of specialized terms are

representative for the communication of surgical staff. The largest category in surgical terminology is undoubtedly the names of instruments and materials used in surgical procedures, with a distinction being made between professional terms for instruments (many of which are computer-controlled or electrically powered) used to perform particular operations, smaller instruments, various auxiliary and sterile materials, as well as materials that are temporarily or permanently implanted. The terms used are of varying degrees of precision. Most implicit complex terms are the name of a specific instrument or just an element of it. But there are also collective names for the entire instrumentarium used to perform operations on a particular organ using the appropriate technique. There is a certain correlation between the semantic group and the morphological class of specialist terms, namely the terms "individual tools" or their elements are usually in German in the form of assemblies whose individual elements are the names of body parts or organs, the names of inventors or the numbers indicating the size of the tool. Collective names, on the other hand, contain abbreviations that function as international symbols for surgical techniques and, as independent terms, constitute the second largest representative group of the surgical nomenclature. Many names of surgical techniques also have the form of eponymic assemblies. There are also numerous definitions of the types of surgery related to organs or parts of the body or the purpose of the operation, while the definitions of the purpose of the operation function as collective names for particular types of surgical procedures, e.g. *Aneurysma-OPs* - aneurysm surgeries, *Antirefluxplastik* - anti-reflux plastic surgery. Such implicit terms complex only in individual cases have the form of abbreviations. More often they are just folds, the elements of which are borrowed from Latin or English.

The numerous lexical category of surgical language of medicine is also made up of compositions describing the organs or their parts and the parts of the body covered by the operation. Many implicit complex terms are also names of diseases or symptoms that are indications for surgery, but also terms that refer to postoperative complications. In these semantic groups, abbreviations are rather rare because morphologically they are represented by submissions using borrowings. But there are some exceptions, such as *Enterocolitis necroticans* (NEC), *TUR-Syndrom* (post-resection syndrome TUR), with abbreviations functioning as internationalisms.

A slightly less numerous semantic group is formed by the definition of individual actions taken in an appropriate order during the operation, starting with those concerning patient preparation and the necessary tools, possible surgical cuts and ending with the placement of

appropriate sutures and dressings. Also in this semantic group, most of the implicit complex terms are in the form of compositions.

In contrast, the group of names of regulations and medical institutions are abbreviations. Among the surgical complex terms, however, they constitute a small semantic group. Many of them are not given in the Polish edition of the textbook at all. The most probable reason for this is the fact that most of these terms are not internationalisms and refer only to the realities of German medicine, and not to the regulations in force in Poland and to organizations operating on its territory. If they already appear in Polish, they have the form of nominal phrases, similarly to almost all Polish terms used in the surgical nomenclature used in the textbook under analysis. For this reason, the summary of the conducted analysis abandoned the reference to morphological and semantic relations between Polish equivalents of implicit complex terms, because in this respect, the Polish edition of the textbook shows a broadly understood homogeneity manifesting itself in the fact that nominal phrases, sometimes simple lexemes and rarely abbreviations are the dominant forms of Polish equivalents of German assemblies or abbreviations, without any particular dependence on belonging to a semantic group.

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To sum up, there are many differences between German and Polish terminology, but there are also some similarities. The main difference concerns the formal side of complex lexemes. In this respect, the German nomenclature is more diverse, as implicit complex terms include word-forming structures such as multiple complex compositions (written together or using connectors). Most of them are determinative compositions (*Determinativkomposita*), the individual elements of which are also copulative compositions (*Kopulativ-Komposita*). Another morphological class is made up of abbreviations with various internal structures. These include letters (*Buchstabenkurzwörter*), syllables (*Silbenkurzwörter*) and partial abbreviations with the central, initial or end position (*partielle Kurzwörter mit Erst-, Zentral- oder Endgliedposition*).

In the Polish language, however, the role of equivalents of German implicit complex terms is played mainly by nominal phrases, often very long, composed of many additions. On the other hand, abbreviations are less frequent, especially internationalisms, which are used in specialist circles in both languages. However, these are mainly letters which function independently or as components of nominal phrases.

There are also some differences in the use of foreign language material within surgical nomenclature. In German, borrowings of Greek, Latin or English origin are more common than in Polish. Borrowed lexical units are replaced by their Polish counterparts. On this basis, it seems justified to state that Polish terminology shows greater linguistic purism.

The common feature of the lexical layer of both languages is the use of eponyms as names of instruments or surgical techniques and the use of manufacturers' own names for specific surgical materials.

From the semantic point of view, both Polish and German terminology is more homogeneous, which seems obvious, since the German terms used and their Polish equivalents refer to the same denotations of extra-linguistic reality. The exception are those terms that describe objects, phenomena or facts that are different in both language areas. However, German and Polish complex lexemes may show a higher or lower degree of precision. Some Polish terms are the implications (concretisations) of German specialist terms, while others are the implications (generalisations) of their German equivalents.

Given the structural characteristics, it can be concluded that German composite lexemes should be defined as implicit composite terms rather than German composite lexemes and not necessarily the corresponding Polish nominal phrases, which show a more explicit character on the surface of the text. In this respect, German terminology shows a higher degree of compression and, consequently, a higher degree of language economy.

The main goal of this dissertation was to present similarities and differences between the complex lexemes of German and Polish medical language. Such a contrasting and comparative analysis has shown that the same specialist information can be conveyed in a strictly condensed form by means of various means of expression in different language systems. The accompanying analysis of the decoding of the meaning of individual constituent terms as individual elements of implicit complex terms and the proposed translation strategies can be very helpful in the translation of specialist texts, such as the analysed medical textbooks.

It should be noted, however, that the aim of the analysis was not only to present methods for translating a specialised language, but also to show the inter-lingual differences in the form of expression of certain specialised content, which in itself can make a significant contribution to translatorial work, in which linguistic awareness and knowledge of the culture of a given linguistic area is an indispensable aspect of every translator's competence. Therefore, the analysis also takes into account these observations, which are also relevant from a translator's point of view, and proposes possible techniques for translating individual German implicit complex terms into Polish.

In conclusion, the interdisciplinary nature of the dissertation makes it an attractive place not only for linguistics in general, but also for everyday professional practice, where working with the language is an indispensable and sometimes indigenous element.