

Eötvös Loránd Tudományegyetem

Faculty of Humanities

DISSERTATION ABSTRACT

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**CONTEMPORARY HUNGARIAN MEDICAL  
ORTHOGRAPHY**

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## **1. The aim and relevance of the thesis**

The thesis investigates contemporary Hungarian medical orthography. This empirical research is based on a corpus. The two aims of the research are: to review the present use of medical orthography, and to give suggestions concerning the ambiguous areas. These suggestions might create the basis of medical orthography regulations and orthographic dictionaries in the future.

The investigation of Hungarian medical orthography is relevant from numerous different aspects. The upcoming publishing of the academic orthographic dictionary makes the issue even more up to date. As terminological orthographies rely on general orthography and extend general orthography, with the modification of general orthography revision of medical orthography also needs to be considered.

Orthographic issues have been dealt with by the medical society for a long time. The Medical Orthographic Dictionary (Fábián & Magasi, 1992) was published as result of the work of the Medical Terminology and Orthography Committee of the Hungarian Academy of Sciences and contained brief instructions regarding orthography with 90 000 dictionary items. Researches show on the other hand, that terminological orthography regulations are not well-known among the scientists of the field and the regulations superficial as well. The Medical Orthographical dictionary mainly focuses on the orthographic issues of the same dictionary items that can be and are spelled in a Latin fashion or in a Hungarian fashion. Obviously, other important areas of orthography such as writing words solid or separate, abbreviations, and acronyms are neglected. Another linguistic phenomenon, a characteristic of medical terminology is the usage of accessory letters and accessory numbers (Bősze, 2006, 2007). Unfortunately, this area also represents an uncovered area by the above dictionary. These hiatuses make the research even more relevant.

Thirdly, the changes that have taken place in the Hungarian medical terminology also urge the extensive and thorough study of the terminological orthography. The Medical Orthographic Dictionary was published more than two decades ago and the scientific development since then has also brought changes in the medical terminology as well. Newly emerging areas, for instance molecular biology enriched vocabulary, new

notions were created and consequently new orthographic issues started arising. Another noteworthy linguistics change was the international implementation of English in the medical journals and medical literature in general. As a result of this process linguistics elements of English origin have also become more common in the Hungarian medical terminology too.

In conclusion, the study of medical orthography draws the attention the issues are not terminology specific but are the characteristics of Hungarian orthography in general and these areas are either not regulated completely today. One of these areas is the issue of writing words solid or separate.

The innovation of the study relies on the fact that it approaches orthography from the perspective of language usage, more precisely writing practice. The orthography is primarily prescriptive field but the thesis strives to avoid this “from above” perspective. The aim is to take existing writing practice tendencies into consideration and to give orthographic suggestions accordingly.

## **2. The corpus**

The corpus of the research contains approximately 15 000 medical words and phrases. During the process of compilation of the corpus, I examined diverse medical works. The lingual data are collected from academic course books, medical handbooks and science nonfiction articles from the website Informed<sup>1</sup> (between 2009 and 2012). (The list of the sources are available at the end of this abstract).

I also used another corpus which contains approximately 600 abbreviations of the medical terminology. The source of this corpus were clinical notes, charts of an ophthalmological clinic (Siklósi, Orosz & Novák, 2011). As these clinical charts were not written for broader audiences but for “in house use” only, abbreviations are more frequent than in a document that was meant to be published.

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<sup>1</sup> <http://informed.hu/> (2013. 07. 01.)

### **3. The structure of the dissertation**

After the introduction (1) I introduce the theoretical background of the topic (2). As medical terminology is a language of scientific field, the term terminology has to be clarified first. Chapter 2.1.1 enumerates the results of terminological orthographic regulations till nowadays. Chapters 2.2. and 2.3 present the theoretical background of the medical terminology. Basic notions need to be defined: the definition of medicine, its place among sciences (2.2), the definition of medical terminology (2.3.1). Later on, I briefly describe the development of medical language (2.3.2, 2.3.3). As closure I present the mean achievements of the medical orthographic regulations from the second half of the 19<sup>th</sup> century till today.

In the main section of the thesis (3) the main issues of the contemporary Hungarian medical orthography are displayed based on the analysis of the corpus data. First the dilemma of Latin or English fashion spelling vs. Hungarian fashion spelling is examined (3.1), and then the thorough analysis of writing words solid or separate is presented (3.2). In another subchapter abbreviations and acronyms are also dealt with (3.3), and the so called accessory letters, accessory numbers are also presented.

The subchapters of the main chapter (3) have the unified structure as follows: in a brief introduction an overview of the contemporary orthographic regulations is given (AkH. 1984; Laczkó & Mártonfi, 2004; Bősze & Laczkó, 2009). After the examination of the existing orthographic regulations the actual language usage patterns are presented. Thirdly, orthographic suggestions are given in case they are necessary. The orthographic suggestions are given in accordance with the guidelines of the academic orthographic regulations, the Medical Orthographic Dictionary and The Handbook of The Hungarian Medical Language (Bősze & Laczkó, 2009).

In the final chapter, a conclusion is drawn regarding each orthographic issue and possible solutions are delivered in the ambiguous cases.

The following appendices are attached to the thesis: appendix 1 is the vocabulary list of the questionnaire based research, as presented in 3.1.2.2. Appendix 2 displays the results of the same experiment in a table format. In appendix 3, typical dependent

prefixes are listed (approximately 800 items). According to my suggestions, these should be considered compound word elements with regards to the syllable counting rule. Appendix 4 lists the dependent suffixes (approximately 100). Appendix 5 presents a dictionary sample based on the examples that were displayed in the thesis.

#### **4. Theoretical background**

As the title indicates, the thesis investigates the contemporary Hungarian medical orthography. The medical orthography is one of the terminological orthographies, so the notion of terminology needs to be defined. Though some scholars (Dániel, 1982) criticized terms like *technical language* and *medical language* as these expressions might give the impression of distinct languages. Contrarily to this, I use the term *terminology* consequently in accordance with those who claim that language in phrases like technical language refer to language usage (Kontra, 1983; Grétsy, 1988).

The term terminology is discussed in many ways: as a sociolect (Sebestyén, 1988; Wacha 1992; Kiss, 2002; Cseresnyési 2004), as a stylistic variant (Kálmán & Nádasdy, 1999), as a register (Wardhaugh, 2005), as a jargon (Kálmán & Nádasdy, 1999, Kurtán, 2003). The dissertation treats terminology as a variant of the language usage which is used to express a specific speech intention connected to a special activity (Kurtán, 2003, 2006). This interpretation of terminologies, in our case medical terminology provides a much broader view than taking the perspective of the linguistic system and considering terminology a unified social language variant, i.e. a sociolect. According to this, medical language is a language variant which is used primarily by medical doctors and other professionals working on the field of medicine during their interaction with each other (Demeter, 2010, 219 p.).

During the decades following World War II a shift took place in the proportion of scientific and fictional literature. A drastic increase is recognizable in publishing scientific literature as opposed to fiction (Fábián, 1988, 1999). In connection with this phenomenon the new need for terminological orthographies is emerging. The source of this need relies in the fact that there is a layer of the vocabulary of the special vocabulary of terminologies that is not regulated completely by the general orthographic

regulations. In order to introduce terminological orthographic regulations the collaboration of linguists and professionals of the field is required (Grétsy, 1988).

In addition to terminological orthographies I also examine various word definitions, compound definitions. This topic becomes relevant because of the chapter on the orthographical regulations of writing words solid or separate. My view is developed from the traditional view (Lengyel, 2000) and is primarily based on the syntactic word definition (Kiefer, 1998; Kenesei, 2000), and secondly on the lexical definition of word (Kiefer, 1998; Kenesei, 2000).

## **5. Results of the dissertation**

Based on the dissertation the following results can be concluded.

Contemporary medical terminology displays ambiguity on the following fields: Latin fashion versus Hungarian fashion spelling of words, writing words solid or separate, abbreviations, acronyms, and accessory letters and accessory numbers (Bősze, 2006, 2007).

2. a) Contemporary Hungarian medical orthography is mainly regulated by two main directives of academic orthography: the directive of target audience and the directive of word integration into general vocabulary. Obviously, there are exceptions but based on the corpus it is clear that in texts that are targeted at medical professionals the Latin fashion spelling is more common, whereas in texts that are targeted at layman the phonetic spelling is more dominant. The spelling of Greek–Latin words shows the level of their integration into general vocabulary. Those vocabulary items that have been introduced to general vocabulary lately, show a spreading tendency of phonetic spelling. The so called hybrid spellings i.e. *cystikus*, *follikulus* also indicate the vocabulary items shift to general vocabulary.

2. b) Due to the development of medicine and the spreading usage of English as a lingua franca there is an increasing number of English originated linguistics elements. In the case of English originated vocabulary items, the phonetic spelling is less frequent than

in the case of Greek–Latin words. Though, unsteady items also exist, for example *chip* ~ *csip*, *drain* ~ *drén*, *stroke* ~ *sztrók*, the Hungarian fashion spelling is less frequent.

2. c) In cases when adding suffixes to words coming from Greek, Latin or English is necessary, speakers tend to maintain the spelling of the original language. This phenomenon can be clearly demonstrated by the usage of hyphen in these cases: *\*shock-ot* ACC, *\*shock-ban* LOC, *tibiae-n* LOC. In accordance with academic orthography, those words that end with complicated letter groups that are not common in Hungarian, or end with silent letters, then the word must be hyphenised. As usually, I have used the \* sign to indicate the erroneous usages in the above examples. Speakers also tend to maintain the original spelling in other cases such as extending vowel length, the extension usually does not occur. This phenomenon is especially relevant in the case of words ending with *-tio*: *\*claudicatioja*, *\*obstructiot*, but it is also recognizable in *\*psyches*. This usage adheres the original word stem and enables integration.

2. d) In those constructions where a word from a foreign language and a Hungarian word are compounded, speakers tend to hyphenise. Contrarily to the fact that no similar regulations have ever existed in academic orthography or in terminological orthography, the phenomenon is common in the medical writing practice. Speakers maintain the original spelling to make the word easily recognizable, and the compounding also seems to be loose compared to the cases when both elements of the compound construction are Hungarian.

3. a) Similarly to general orthography, one of the most problematic areas in medical orthography is the question of writing words solid or separate. The distinction between compounds and collocations is ambiguous and this can be clearly demonstrated by the unsteady writing practice as well.

3. b) According to the Hungarian general orthographic rule of *syllable counting*, in compounds that consist of at least three words and are seven or more syllable long, the main compound element boundaries have to be hyphenised. Upon the corpus data it can be concluded that this rule is well-known and is applied adequately. Ambiguities arise in the case of prefixes, sometimes suffixes with words of Latin–Greek origin i.e. *anti-*, *endo-*, *exo-*, *ortho-* etc. The academic orthography regulation advises considering

structures starting with *centi-*, *deci-*, *deka-*, *extra-*, *hekto-*, *kilo-*, *ultra-* prefixes joined with another word a compound. The investigations shows that in these constructions, the speakers have a stronger sensation of jointness and consequently the syllable counting rule is applied when there are additional compounding elements. In my interpretation this tendency is so influential, that it should be applied in the case of the previous group as well. The basis of distinction should be that the prefix is dependent, i.e. does not occur independently, the prefix can be found in other compound constructions as well, and the second element occurs independently. For example *citoplazma* should be considered a compound as it can be found in other compound constructions like *citoarchitektúra*, *citogenezis* and *plazma* exists independently. The research has also showed that prefixes joined with dependent suffixes do not occur independently either. *Radiográfia* and *szcintigráfia* could be mentioned here as examples of the phenomenon.

3. c) From the three variable rules, the second and the third were questions during the research. Instead of the second variable rule speakers write words separate contrarily to orthographic suggestions. In other cases such as *\*haemophilus influenzae fertőzés* the only correct spelling is writing all the elements separate, *haemophilus influenzae fertőzés*, respectively. This practice seems to be the general one.

3. d) The application of the third variable rule is also noteworthy. The hyphen usage is unsteady; besides using hyphen, using dash is also spreading. This is especially frequent in cases when there is a notional shift from a beginning point to an end point. I suggest using dash in those rare cases where it expresses a distinction meaning, for instance *hidrogén-hélium átalakulás*, *hidrogén–hélium átalakulás*, more over in accordance with Technical Terminology Dictionary (Fodorné Csányi & Fábrián & Csengeri Pintér, 1990) the usage of dash is necessary in case one of the joined elements already contain a hyphen. *Alfa-részecske–gamma-részecske atomreakció* might be perfect example for this phenomenon. Even though the usage of dash cannot be criticized in other cases, in my opinion it is not necessary either.

3. e) The least regulated area of writing words solid or separate are the structures involving the negation word *nem*. However, there are suggestions concerning writing them solid, for example if the negation word is joined with a so called collective noun



(or in my words: a class name), but unfortunately these regulations are not satisfactory. I suggest writing those nouns solid that denote a collection of elements, but do not create a union. The lack of unity distinguishes them from traditional collective nouns. These group nouns are frequently used in medical terminology, some examples are: *fémek*, *terminálisok*, *szteroidok* (metals, terminals, steroids) consequently, the proper spelling should be *nemfémek*, *nemterminálisok*, *nemszteroidok*.

4. a) A key characteristic of medical terminology – especially pieces of non-scientific everyday medical terminology; for example clinical notes, charts – is that these texts contain complicated collocations with expressions coming from foreign languages. These collocations are often abbreviated to increase fast readability. The research focuses on the frequent abbreviations on the medical charts. The issue of abbreviations has only been dealt with indirectly by the regulations of medical orthography. As the issue is poorly regulated, there is an abundant variety of possible abbreviation routines. This inconsequent usage is noticeable even within the same text, for instance *o. d.*, *o. dex.*, *o.d.*, *o.dex.*, *od.*, *odex*, *ODEX*.

4. b) Sign-like abbreviations, for example periodical signs, the signs of the four cardinal points, abbreviations of metric values, and acronyms occur frequently in medical terminology. The ambiguous issue in relation to these expressions is the usage of hyphens, more precisely the omission of hyphen is typical. If an abbreviation or an acronym already contains a hyphen, then the additional hyphen – needed because of an extra compound element – is often omitted.

5. Another characteristic of medical terminology is the frequent usage of accessory letters and accessory numbers. Accessory letters are different from one-letter acronyms. The usage of accessory letters and accessory numbers is unsteady, there is no academic regulation regarding their usage. On the other hand, the directives provided in the Hungarian Medical Terminology Guidebook might serve as a guideline concerning their orthography. Based on my research, an inconsequent usage can be concluded and there are only a few areas, which are spelled in accordance with the rules of the book. For instance *αγ-részecske* is written without a hyphen and the accessory letters are written solid. As for the acronyms, they are written solid and are joined with other words by a hyphen. Accessory letters functioning as prefixes or suffixes are used as a structure

containing abbreviations or acronyms and the additional elements have to be added by a hyphen.

The thesis gives orthographic suggestions concerning the above mentioned areas based on the already existing orthographic regulations, leaded be general or terminological (AkH. 1984., Laczkó & Mártonfi, 2004; Fábíán & Magasi; 1992; Bősze & Laczkó, 2009). As the research was conducted on a corpus, the necessity of these complementary considerations is also based on the examined sample. In the future, these suggestions might be an ideal ground for a future extended medical orthographic regulation and dictionary.

## 6. Papers

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