TERMINOLOGY AND LABELLING WORDS BY SUBJECT IN MONOLINGUAL DICTIONARIES – WHAT DO DOMAIN LABELS SAY TO DICTIONARY USERS?

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Abstract: The paper focuses on labelling words by subject in a non-specialized dictionary. We compare the existing monolingual dictionaries of Czech and their ways of labelling terms of medicine and related fields; besides apparent differences between dictionaries, there are also inconsistencies within one dictionary. We consider pros and cons of domain labels as such and their usability in the light of needs and limits of dictionary users, with the aim to motivate further discussion on related issues.

Keywords: terminology, terms, lexicography, monolingual dictionary, e-dictionary, domain labels, Czech

1 INTRODUCTION

The accelerated development of science during the past century and the development of mass communication are followed by growing interest of the public in terminology, especially in several past decades. Specialized vocabularies of all fields of interest become part of laypersons' lives as a part of popular culture because of increasing use of scientific terms in mass media [1], [2]. Naturally, in monolingual dictionaries of Czech the number of terms steadily increases.[1] However, as it will be argued in this article, concepts of terminology processing in monolingual dictionaries of Czech vary and so does the level of their usability and user-friendliness.

Despite the aforesaid quick development of terminology, in Czech especially since the 1990', linguistic attention to this field is not sufficient. Except for major works of Ivana Bozděchová [4], [5], most papers devoted to (selected aspects of) terminology of specific fields were published with medicine being the most frequent topic [6, 7, 8]. There is a lack of studies dealing with the treatment of terminology in (non-specialized) dictionaries,[2] a few authors comment on domain labels [15], [12], [16], [17].

In our paper we will focus on labelling process and domain labels in monolingual dictionaries of Czech. Our examples are mostly taken from medicine and rela-

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[1] We have proved it for the field of medicine in our paper [3].

[2] Not considering prefaces of monolingual dictionaries and similar conceptual materials [9], [10], [11], we have only one specialized study by Jaroslav Machač [12] in Czech linguistics; more recent works come from Slovak authors [13], [14].

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ted fields.[3] Traditionally, special attention is paid to medical terminology, both by Czech (see above) and foreign linguists [18], [19], [20], [21], reflecting the importance of medicine and growing interest of the public in the matters of health and illness. Even more significantly for our purposes, in the field of medicine there exist apparent distinction between terminology and substandard, slang expressions[4] (comparing for example with computer science) and between terminology and general vocabulary (comparing with some humanities).

The paper is organized as follows. Firstly, we conceptualize the subject of terminological research and define what the term is from the lexicographic point of view, mentioning also the process of de-terminologization and its consequences for dictionaries. We present how the term is "signalized" with its label in a monolingual dictionary, and give a comparison with the following Czech academic dictionaries: Slovník spisovného jazyka českého, SSJČ, publ. 1960–1971 (The Dictionary of Standard Czech Language), Slovník spisovné češtiny, SSČ, publ. 1978, 3rd ed. 2003 (The Dictionary of Standard Czech), Nový akademický slovník cizích slov, NASCS, publ. 2005 (The New Academic Dictionary of Loanwords), and Akademický slovník současné češtiny, ASSČ, publ. on-line since 2017 (The Academic Dictionary of Contemporary Czech).[5]

Secondly, we assess usability of domain labels for dictionary users, relating to the problems of terminology and labelling presented previously. We are aware of the fact that we present more questions than definite answers and we are ready to discuss the topics at the Slovko conference.

2   TERM AS A RESULT OF CONCEPT FORMATION IN A SPECIFIC FIELD OF SUBJECT[6]

What is the term? From the lexicographic point of view, a scientific term is "a lexical item [...] used in a particular domain of expertise" where it is identified with "a rigidly fixed obligatory range of meaning" [2]. In ASSČ, a scientific term is "name of a concept in the concept system of a particular scientific, technical, economic or other field"[7]. Nomenclature is sometimes treated separately, but for dictionary purposes we regard it as an integral part of terminology. Most scientific terms are multiword units [4] which brings a question how to incorporate them into a dictionary structure.

Despite aforementioned definitions of terms, it is often difficult to determine whether a particular word is or is not a term. Regarding parts-of-speech, only nouns,

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[3] Borderlines between medicine and related sciences (pharmacy, biology, biochemistry, psychology) are often unclear, also medical disciplines such as anatomy or physiology can be treated as separate sciences. Dictionaries choose various ways how to label headwords belonging to these fields, as we will discuss further.

[4] For the definition and concept of slang and professional vernacular in Czech linguistics see [22].

[5] Authors of this paper are members of the team of ASSČ.

[6] [23]

[7] "Termín se v ASSČ chápe jako pojmenování pojmu v systému pojmů některého vědního nebo technického oboru, hospodářského odvětví a dalších oborů lidské činnosti" [11]; following [24].

(underived) adjectives and a specific group of adverbs[8] are usually considered as terms [25], [15], [26]. Adjectives derived from nouns considered to be terms (such as *arteriální,* 'arterial') are sometimes treated as terms on their own, sometimes only as parts of terminological collocations (*arteriální hypertenze,* 'arterial hypertension'). This uncertainty is reflected by variation of labelling in dictionaries, see below. Verbs are mostly not accepted as scientific terms [27], [6] and thus not labelled as terminological units in general dictionaries, not even when a terminological noun is actually derived from the verb (*aspirovat* ,'to aspirate' → *aspirac*e, 'aspiration').

Monolingual dictionaries include terms of the common-use while items belonging to the supernorm [28] too specialized for a general dictionary, with a low frequency or only occurring in specialized scientific literature,[9] are commonly absent.

Sager [31] makes a difference between primary and secondary term formation. The former is a process of designating a new concept, the formed terms come from the general vocabulary. The latter is a process starting with an already existing term. Terms can be borrowed from another language, too, English being their primary source these days.

When terms move from the specialized to general language[10] and they are no longer used exclusively in expert discourse, they become a part of laypersons's communication and their "fixed" nature changes; there is "a variety of semantic, grammatical and pragmatic changes that may occur during de-terminologization" [2]. For the treatment of de-terminologized units in a dictionary, it appears to be the most important whether a clearly distinct new meaning of the original term has developed in the general language (*adrenaline* 1. a hormone, 2. strong excitement and emotions, 3. a thrilling activity causing such excitement[11]), or whether the new usage of the word means "only" blurring or shifting the original meaning, making it less definite (*angína* 'tonsilitis' → any disease with sore throat). The second case brings difficulties how to deal with the particular entry in a dictionary, also whether to keep labelling it as a term.

3   LABELLING OF TERMS

In monolingual dictionaries domain labels are used to signalize the subject matter of the headword (or one of its meanings) in a specific field of interest.

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[8] In the field of music (terms of Italian origin like *allegro*, *andante*) and sport (*snožmo* 'with legs together', *obouruč* 'both-handed').

[9] For SSJČ, SSČ and NASCS headwords-terms were mostly picked from a huge lexical archive built by manual excerption and from older general encyclopedias [12]. The wordlist of ASSČ is built on using Czech language corpus SYN [29]; a minimal frequency is given for all words to be included into the wordlist, and there is another condition for scientific terms, they must occur in non-scientific literature too [30].

[10] "A determinologized lexeme is the result of the transition of a term from a specific terminology to a general lexical inventory, or to put it another way, from scientific texts to texts aimed at the general public" [32].

[11] Paraphrased version of the entry *adrenalin* in ASSČ: "1. chem., biol. hormon dřeně nadledvin regulující krevní tlak a ovlivňující činnost centrálního nervového systému; 2. kolokv. △ silné vzrušení, napětí, silné emoce; 3. kolokv. △ sportovní aktivita nebo jiná činnost spojená s rizikem a nebezpečím, vyvolávající silné vzrušení, emoce účastníků".

Comparing the existing monolingual dictionaries of Czech, slight inconsistency in labelling principles is evident, especially:

a) The same domain is represented by various labels in various dictionaries, see pharmacy and veterinary medicine in Tab. 1.

b) The same headword is sometimes labelled for a specific domain and sometimes stands without any label, see *afázie* ('aphasia'), *angína* ('tonsilitis'), *astma* ('asthma'), *astenik* ('asthenic'), *aspirin*, *antikoncepce* ('contraception') in Tab. 1. In the small dictionary SSČ domain labels are used very rarely, while in NASCS derived adjectives etc. are often labelled, too.

c) The same headword is sometimes labelled for different domains in different dictionaries, see *akrální* ('acral'), *apofýza* ('apophyses'), *kyselina askorbová* ('ascorbic acid') in Tab. 1.

d) Combinations of labels are sometimes used for closely related domains (medicine + psychology: *adolescence, apatie* 'apathy'; medicine + pharmacy: *analgetikum* 'analgetic', *anestetikum* 'anaesthetic', *antipyretikum* 'antipyretic', *antiseptikum* 'antiseptic'), but also for major discipline and its subdiscipline (medicine + anatomy: *abdominální* 'abdominal', *apendix, autonomní* 'autonomous'); see Tab. 1. We noticed different labelling of the same word category in SSJČ and different order of labels in NASCS (*analgetikum × antipyretikum* etc.). Preparing the first part of ASSČ for publication, we did our best to make the label system clear and consistent.

Lastly, we should mention that domain labels are traditionally used in the Czech and Slovak dictionaries and ASSČ follows this tradition, while most e-dictionaries of English do not use domain labels and it seems their users do not miss this kind of information.

4   DOMAIN LABELS AND USERS

Now we come to the crucial part of our paper: what do domain labels say to dictionary users? In Germany, a survey among users of the e-dictionary *elexico* (mostly linguists and professional translators) was performed [33]; the participants considered domain labels as generally useful. A direct and detailed research about stylistic and domain labels in dictionaries of Czech would be welcomed, too.

A domain label makes a direct linkage between a headword and a field where the word is used. However, this kind of information is obvious from the headword definition and exemplification, as well: a dictionary entry beginning with "zánětlivé onemocnění" ('inflammatory disease') or "lékařský přístroj" ('medical apparatus') indicates the field of medicine.

Let us consider other assets of domain labels. Within a polysemic word, a domain label could make searching faster, telling the users immediately whether they are/are not in the field of their interest without reading the full entry. But we disagree that there should be no difference in the way how polysemic and monosemic entries are presented in a dictionary.

Domain labels are also used to mark multi-word items containing words of general vocabulary within the entries of their one-word components: e. g. large entry

bílý ('white') in Czech dictionaries contains terminological collocations from medicine *bílé krvinky* ('white blood cells'), *bílá hmota* ('white matter') etc. Nevertheless, condensation of multi-word units within the one-word entry used to be motivated by limited space in printed dictionaries while in electronic dictionaries there are other ways to present or highlight multi-word terms (separate paragraphs, separate entries, colours – cf. [34]) and a domain label is not necessary just to say "notice me".

The fact that dictionaries use different labels for one domain (lékár. – farm. – farmac.) or combine more labels for one headword should not cause troubles for dictionary users as long as the system is consistent within the particular dictionary and as long as there are not too many labels which would complicate user's orientation in the entry. However, we see as a problem the situation presented in Tab. 1, case d, when headwords of the same category are labelled differently or the order of labels varies. Then users can be confused whether it is an intention (and what does the different label/order signalize?) or a mistake of editors (more likely). Using an electronic dictionary writing systems (DWS Alexis is used for making ASSČ, cf. [35]) allows lexicographers to check and unify labels before publishing far better than in the pre-computer era.

A domain label in Czech dictionaries actually gives two kinds of information at the same time: 1) the word belongs to a specific field of interest; 2) the word is used in specialized communication [12]. In SSJČ and ASSČ a general label odb. ("odborný", 'professional') is used where 3 or more labels of different domains would have to be used; this label system is explained in prefaces of these dictionaries. However, common users are not used to reading dictionary prefaces and then they can be confused, considering the label odb. to be a stylistic one (like slang., expr., hanl. = 'pejorative', etc.), thus headwords without odb. may cause misperception and be understood as non-professional, especially when there is no domain label – e. g. derived adjectives like *arteriální,* 'arterial', not labelled even in the "maximalist" NASCS, but certainly belonging to specialized communication and not to the field of general vocabulary. One might argue that SSJČ and NASCS treat derived adjectives within the entry of their base (the nesting principle), so for *arteriální*, the base noun *arterie* is labelled as anat. and users still get this information. In contrast, ASSČ does not use nesting and the web interface of this e-dictionary always presents a single entry, without the context of related words as it was on a book page;[12] when users see the entry *arteriální*, they are not very likely to check the entry *arterie* for the information about the domain. To be as precise as possible, several types of labels (the domain; specialized/general communication; whether the word is/is not an exactly defined term) would have to be combined for each headword; but such system would be very complicated and would break the lexicographic rule that entries must be clearly arranged and must not overload users with too much information (cf. [36]). Homoláč and Mrázková [16] presented an elaborated system of stylistic labels where the field of scientific communication is represented by an abbreviation vkc ("vyšší komunikační cíle" – 'higher communication intentions') combined with a domain label such

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[12] This applies to alphabetically close headwords only. Base nouns of words derived by the prefix anti-, for example, as *antidekubitní* ('anti-decubitus') or *antiretrovirální* ('antiretroviral'), would be distant in a printed dictionary, too.

as 'lékařský' (medical); a noun *arterie* and a derived adjective *arteriální* would have the same label vkc, lékařský then. However, the system as a whole was assessed as too complicated for common dictionary users and, therefore, not adopted for ASSČ.

Now let's take a look at what information dictionary users expect to get from dictionary labels. There are different groups of users with different needs [37, 38], it is assumed that producers of texts need more information and different kind of information than readers [39]. Considering terminology, an author or a translator of scientific texts may need to know whether a word (or which one of several synonyms) is an exact term, while a reader focuses more on the meaning of the word. Then labelling only strictly defined terms could be useful, but producers of scientific texts are more likely to use specialized dictionaries[13] than general ones. For ASSČ, it was originally intended to label only defined terms; however, after discussions with other Czech linguists the decision was changed to follow the tradition of Czech and Slovak dictionaries and label all words belonging mostly to specialized communication, including derived adjectives, adverbs and verbs.

A user-friendly function of an e-dictionary, searching all words from the particular field of interest, might be appreciated by linguists who use a dictionary for additional lexicological studies. Then the approach of NASCS, labelling nearly all words from a domain and combining close fields, would be more useful; however, some headwords remain unlabelled anyway: general expressions like *nemocnice* ('hospital') or *pacient* ('patient'). For this purpose, thematic labels might be more appropriate: there can be as many as necessary for each headword or meaning (for instance, *atropin* can be classified for medicine, pharmacy, biology, chemistry, biochemistry, botany, toxicology… – such a combination of domain labels would be excessive), they could be invisible so as not to glut the entry, and be used just for searching. The DWS used for compiling ASSČ includes thematic labelling and we hope we will be able to offer this function to ASSČ users in the future.

Domain or thematic labels could be optional in a web dictionary interface and users themselves would choose whether they want or do not want to see referred labels, use them for searching, sorting etc. While web versions of SSJČ, SSČ and NASCS only re-publish original printed versions of those dictionaries, ASSČ is the first Czech academic dictionary compiled as an electronic database and intended for web publication from the very beginning. We can use this advantage to offer customization of a dictionary entry layout; a survey among dictionary users could say whether they would find it useful.

5   CONCLUSION

To sum up, labelling words by subject appears to be a complicated issue. The approach of various dictionaries differs remarkably and it is difficult to follow the set rules of labelling within one dictionary, too. There is little literature on this subject and besides that, lexicographers lack information what dictionary users would actually

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[13] Terminological dictionaries often use other means than labelling to mark terms: the preferred, standardised headword is followed by full definition while less desirable synonyms only refer to that headword [40].

want and find useful. We hope that further discussions on this topic will bring new ideas and improve lexicographers approach to label usage in dictionaries.

		SSJČ	SSČ	NASCS	ASSČ
a	domain "pharmacy"	lékár.	lékár.	farm.	farmac.
	domain "veterinary medicine"	zvěr.	vet.	vet.	vet.
b	*afázie, angína, astma*	med.	-	med.	med.
	astenik	-	-	med.	-
	aspirin	lékár.	-	farm.	-
	antikoncepce	N/A	-	med.	-
c	*akrální, apofýza*	anat.	N/A	med.	N/A
	kyselina askorbová	chem., med.	N/A	med.	chem., biol.[14]
d	*adolescence*	ped. [= pedagogy]	N/A	med., psych.	-
	apatie	-	N/A	psych., med.	med., psych.
	analgetikum	med.	N/A	farm., med.	farmac.
	anestetikum	med.	N/A	med., farm.	farmac.
	antipyretikum, antiseptikum	lékár.	N/A	med., farm.	farmac.
	abdominální	anat., med.	N/A	med.	N/A
	apendix	anat.	anat.	anat., med.	anat.
	autonomní	med.	N/A	med., anat.	N/A

Tab. 1. Differences in labelling in monolingual dictionaries of Czech. Symbols stand for: - = the headword is not labelled in the dictionary; N/A = the headword is not included in the dictionary. Cases a, b, c, d – see in the text; compared labels are sorted and placed in order following the text.

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[14] In ASSČ we treat all chemical substances, including drugs, hormones etc., primarily from the chemical point of view. Combination of labels chem., biol. stands for biochemistry. See [41] for details.

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