


Theoretical Underpinnings of Metaterminography

Marek ŁUKASIK

Akademia Pomorska w Słupsku/ Pomeranian University in Słupsk

E-mail: marek.lukasik@apsl.edu.pl, 

Abstract: The ongoing debates on the academic status and scope of (meta)lexicography prove that the discipline is undergoing rapid changes. Some scholars voice their doubts about the feasibility of a theory of lexicography, while others have indicated that the development of such a theory is possible within metalexicography, thus qualifying it as a theoretical pillar of lexicography. Still others claim to have already developed a theory. Similar discussions have permeated terminography and its ‘theoretical’ branch, i.e. metaterminography. Therefore, in an attempt to answer some pressing questions regarding the standing of terminography, this paper ventures to define and characterise terminography and metaterminography, as well as discuss some of their fundamental notions. It also aims to present some theoretical considerations that can contribute to a growing body of studies that might one day result in the drafting of a comprehensive and universal theory of terminography.

Keywords: lexicography, metaterminography, quality, specialised dictionary, terminographic analysis, terminographic work, theory

1. Introduction

Lexicography is probably maturing right before our eyes, although the transformation has now lasted for several decades. An indication of this solidification lies in the fact that after hundreds of years (or even millennia) of dictionary-making, lexicographers have started to academically address the issues within, or related to, lexicography as a whole. They have also attempted to delineate and define their area of interest and have sought to confirm the scientific status of lexicography as an independent discipline. One of the most hotly debated issues concerns the theoretical background of lexicography, or a proposed theory of lexicography (see e.g. H. Béjoint 2010: 381, P.A. Fuertes-Olivera/ S. Tarp 2014: 34–43, T. Piotrowski 2013, S. Tarp 2010). A. Adamska-Sałaciak neatly summarises the ongoing deliberations:

Within lexicographic circles, the debate so far has centred on the multifaceted question whether lexicography has a theory, whether it needs one, and (not) having theory means for the status of lexicography as a discipline (A. Adamska-Sałaciak 2018: 1).

In her paper, the scholar rightly points out that the concepts of ‘science’, ‘theory’ and ‘lexicography’, as they are used in the discussions on the scientific status of lexicography, are far from being universal across languages (*ibid.*). Accordingly, proposals of a ‘theory of lexicography’, such as that of S. Tarp’s (2008) or the con-

ception of metalexigraphy¹ as ‘the theoretical component of lexicography’, can be considered legitimate as long as they are presented in a specific socio-linguistic context in which they originate². Such relativist view can help establish a proper framework or a common ground for the development of a universal theory (theories) of lexicography, which may help solve several problems in this transitional period for lexicography.

The reason the current state of lexicography can be called ‘transitional’ is linked to the digital revolution in the discipline. However, what the digital revolution is bringing with it is certainly not linked to an elaboration of digital copies or adaptations of book (traditional) dictionaries, but to the construction of completely new online lexicographic resources (P.A. Fuertes-Olivera/ S. Tarp 2014: 12–18). Such new lexicographic resources often merge with other software, making lexicographic products hardly recognisable. Indeed, a completely new and advanced theoretical and methodological paradigm is necessary (ibid.)³. Some scholars even foresee the subsuming of lexicography under a wider reference or information science, first, on account of the similarity of lexicographic works to other reference works (T. McArthur 1998: 219 as cited in H. Jackson 2013: 2, S. Tarp 2010: 454), and, second, as a result of the already-mentioned merging of lexicographic products into integrated lingware⁴ or online reference tools (S. Tarp 2007, R.R.K. Hartmann 2016: 29–30, among others). However, the full development of e-lexicography or a reference science with a lexicographic component within it, and a respective theory/methodology to guide the former, does not preclude the drafting of a theory of lexicography encompassing its past (traditional) and current (transitional) shape. In fact, such theories might be necessary to build a unified and universal theory of lexicography (or that of a reference science).

The considerations presented above also point to another issue raised in connection with the academic status of lexicography, namely its independence from other sciences. In particular, a number of scholars have advocated a sharp separation of lexicography from linguistics, particularly from lexicology, semantics and applied linguistics (H.E. Wiegand 1984: 13, W. Miodunka 1989: 9). In other words, linguistics/ lexicology/ grammar/ etymology, etc. should not be seen as the theoretical foundation(s) of lexicography, although the findings of these disciplines are sometimes presented in dictionaries. Interestingly enough, some scholars have been caught in the trap of allowing lexicography to pass from one hands to the other

¹ The term ‘metalexigraphy’ is attributed to J. Rey-Debove (1971), see (R.R.K. Hartmann 2016: 28).

² Therefore, scholars usually define fundamental concepts related to their considerations. Admittedly, the authors of the ‘functional theory’ have done so (S. Tarp 2008: 4).

³ In fact, P.A. Fuertes-Olivera and S. Tarp suggest that the ‘function theory’ would be the theory sought.

⁴ An example of an offline integrated lingware (one that also features a dictionary) is *Write Assistant*, developed in Denmark for Danish native speakers writing in English (see S. Tarp/ K. Fisker/ P. Sepstrup 2017).

(cf. M. Grochowski 1982: 19–20, W. Miodunka 1989: 9–27, 53–58, 217–220)⁵. Some metalexigraphers – as has already been mentioned – place lexicography within a wider ‘reference science’⁶. On the other hand, several scholars have made a strong point by suggesting an independent status of lexicography (be it a science or not), mainly on account of the fact that lexicography fulfils the necessary criteria for an independent field of study (P.A. Fuertes-Olivera/ S. Tarp 2014: 241–242; T.J.D. Bothma/ R.H. Gouws/ D.J. Prinsloo 2016: 109). Still others, most notably H.E. Wiegand, have additionally advocated a clear demarcation between lexicography and metalexigraphy. According to the scholar:

Lexicography was never a science, it is not a science, and it will probably not become a science. Scientific activities as a whole are aimed at producing theories, and precisely this is not true of lexicographical activities⁷. We must bear in mind that writing on lexicography is part of meta-lexicography and that the theory of lexicography is not part of lexicography (H.E. Wiegand 1984: 13).

Parallel to suggesting a qualitatively different status of lexicography and metalexigraphy, the H.E. Wiegand’s seminal work also suggests an outline of the areas of metalexigraphic studies, including:

- history of lexicography;
- research on dictionary use;
- criticism of dictionaries;
- general theory of lexicography, which includes:
 - A. general section, i.e. studies of purposes of dictionaries, relationship to other theories, principles from the history of lexicography;
 - B. theory of organisation (of metalexigraphic activities);
 - C. theory of lexicographical research on language (theory of data collection, data processing and computer assistance);
 - D. theory of the lexicographical description of language (including textual theory for lexicographical texts and elaboration of dictionary typology).
 (H.E. Wiegand 1984: 15).

It seems that proposals put forward by H. E. Wiegand generally hold till the present day, for example among Polish scholars (see e.g. M. Bańko 2001: 21, T. Piotrowski 1994a: 10, E. Rudnicka 2016). Even if we assume a strict definition of

⁵ For example, W. Miodunka takes a critical view of the proposals which see theoretical linguistics and/or lexicology as theoretical bases of lexicography (cf. W. Doroszewski 1970: 37). However, the scholar himself attaches lexicography to applied linguistics, the latter understood as “research on the possibilities of utilising the accomplishments of linguistics in various spheres of life and other scientific disciplines” (W. Miodunka 1989: 55–57, 216 – translation mine, M.Ł.).

⁶ Interestingly, the *Dictionary of Lexicography* regards reference works as objects of lexicographic practice. According to DoL, lexicography [is] “The professional activity and academic field concerned with DICTIONARIES and other REFERENCE WORKS” (R.R.K. Hartmann/ G. James 2002: 85 – emphases are not mine).

⁷ The researcher clearly defines ‘lexicographic activities’, which comprise a set of activities constituting the practical part of dictionary-making (H.E. Wiegand 1984: 14).

‘science’ and agree that neither lexicography nor metalexicography is a science (A. Adamska-Sałaciak 2018: 13), then most certainly metalexicography is an area of study that systematically ‘writes on dictionaries’, to use H.E. Wiegand’s words. Accordingly, it does develop its own theoretical underpinnings.

The considerations presented so far are the necessary point of departure for the following discussion on the status and research scope of metaterminography. This sequence of reasoning is justified, especially as the fundamental assumptions of the two areas of research largely overlap, which will transpire from the following sections.

2. Status and areas of study in metaterminography

(a)

Naturally, discussions related to lexicography in general, have also influenced specialised lexicography, or terminography, although in the case of the latter they fall behind by about two decades, with some important changes in the approach to the theoretical thought of specialised lexicography traced to the work edited by H. Bergenholtz and S. Tarp (1995).

One of the issues frequently discussed in metalexicographic/ metaterminographic literature is the delineation of allegedly different fields of specialised lexicography, terminological lexicography, LSP lexicography and terminography. In particular, a number of scholars have insisted that the methods and construction principles of LSP/ specialised lexicography are different from those adopted in terminography (cf. H. Bergenholtz/ U. Kaufmann 1997). The problem probably arises from the traditional approach to terminology, in which terminography is seen as the last phase of terminological work, and is therefore seen as part of terminology. According to ISO 1087-1:2000 standard, terminography is “part of terminology work concerned with the recording and presentation of terminological data”, while terminology work is “work concerned with the systematic collection, description, processing and presentation of concepts and their designations” [i.e. terms]. The standard also defines terminological data, which are “data related to concepts or their designations.” The standard adds that terminological data are “presented in the form of term banks, glossaries, thesauri or other publications” (ISO 1087-1:2000).

The more recent understanding of the term is presented in the *Dictionary of Lexicography*, which defines terminography as “A complex of activities concerned with the design, compilation, use and evaluation of TERMINOLOGICAL DICTIONARIES”, and describes terminological dictionary as “A type of REFERENCE WORK which provides information about the language (especially the VOCABULARY) of a specialist field as defined by its practitioners” (R.R.K. Hartmann/ G. James 2002: 139–140, emphasis is not mine). The *Dictionary* also defines terminology as “A field concerned with the theory and practice of coining, documenting and explaining technical TERMS in general and their use in particular fields of specialisation” (ibid.: 140).

Although the definitions presented are not without ambiguities (e.g. the term ‘information’) or limitations (e.g. no mention of ‘theory’ or ‘methodology’ of termino-

graphy), they are useful in that they make a clear distinction between terminology and terminography (cf. P.A. Fuertes-Olivera/ S. Tarp 2014: 104–128)⁸.

In the approach adopted in this paper, the term terminography is equivalent to the other terms listed in the first paragraph of this section – a position that largely remains in line with the views presented by H. Bergenholtz and S. Tarp (1995: 10–11). The term terminography is used deliberately here as it is thought to best reflect the dominant content of terminographic works (i.e. terminology, understood as a set of terms). It is also regarded as more transparent (see footnote 9). No distinction is made between the terms specialised⁹, specialist, terminological or LSP dictionary, however one should realise that in specific contexts (e.g. typologies), these terms may not be fully synonymous. To account for a variety of terminographic products, a generic term of terminographic work is used. Terminographic works include, *inter alia*, lexicons, specialised encyclopaedias, specialised encyclopaedic dictionaries, terminological dictionaries, thesauruses, terminological databases, term banks, etc.), i.e. reference works that present terminology (=specialised lexis), that have been created/ compiled according to terminographic principles (see the following sections), and whose aim is to facilitate specialist communication.

(b)

Terminography is considered an umbrella term that relates to all theoretical, methodological, and practical undertakings concerned with all types of terminographic works. By analogy to the notion of metalexigraphy, the concept of metaterminography relates to research activities encompassing both theoretical and methodological considerations of terminography. In this approach, no theory of terminography is proposed or advocated¹⁰, however, theoretical foundations (i.e. constructs, theses, models, findings, etc.) are recognised as results of metaterminographic activity. The recognition of the academic status of metaterminography is supported by the fact that specific areas of metaterminographic study apply specific scientific procedures to ensure high research quality, for example the three-stage epistemological process of diagnosis – anagnosis – prognosis (F. Grucza 1983/2017: 70–79). The primary object of (meta)terminographic activities is the terminographic work. Accordingly,

⁸ Quite surprisingly, in chapter 7 of their book, P.A. Fuertes-Olivera and S. Tarp equate terminology and terminography throughout the entire chapter. They adopt only one meaning of terminography, i.e. the one which is in line with traditional view of terminology, as outlined in the ISO standard cited above, disregarding changes that have occurred recently. Put simply, the authors see terminology as the theoretical basis for terminography.

⁹ However, in the already cited *Dictionary of Lexicography*, the term ‘specialised dictionary’ is equated with the term ‘special dictionary’ and is defined as “The collective term for a range of REFERENCE WORKS devoted to a relatively restricted set of phenomena” (R.R.K. Hartmann/ G. James 2002: 129, emphasis is not mine). An example of such a work is the etymological dictionary. The branch of lexicography concerned with such dictionaries is termed ‘specialised’ in the *Dictionary* cited (ibid.).

¹⁰ This constitutes a refined approach to the notion of terminography, in comparison to some of the author’s earlier statements (cf. e.g. M. Łukasik 2007: 7, 2010: 21; see also S. Gajda 1990: 118).

the ultimate goal of metaterminography is to produce theoretical and methodological results that facilitate the construction of ever better terminographic works (cf. M. Rundell 2012). It needs to be borne in mind that metaterminographic research focuses on terminographic works along with other intra-, and extraterminographic theories/ parameters/ variables that in one way or another remain related to terminographic products.

(c)

Metaterminography as a complex of research activities can be subdivided into the following areas of investigation:

- elaboration of the theoretical underpinnings and methodology of terminography (including the development of theoretical and methodological principles of terminographic activity, drafting typologies of terminographic works, defining global functions of terminographic works, elaborating terminographic data processing, etc.);
 - systematic studies of existing terminographic works;
 - criticism of terminographic works;
 - studies of the use and users of terminographic works;
 - drafting the history of terminography;
- (based on: M. Bańko 2001: 21; H. Bergenholtz/ S. Tarp 1995: 31, R.R.K. Hartmann 2016: 29–31, T. Piotrowski 1994b: 11, H.E. Wiegand 1984, 1998: 6–12, P. Żmigrodzki 2005: 16).

The above list merely suggests the (sub)fields of metaterminographic studies and should be regarded as an organising tool when defining the scope (extent) of metaterminographic activity, rather than an enumeration of independent research fields. Naturally, the areas of metaterminographic studies will overlap to a great extent and will share several principles and research methods. For example, studies into the history of terminography consist in both literature review and a study of terminographic works published within a specific time frame (a study that would adopt the principles and methods of systematic studies of terminographic works, such as those developed for terminographic analysis (=diagnosis and anagnosis phase), in order to evaluate the progress made, and, ideally, suggest optimal solutions for future terminographic projects (=prognosis phase).

It is worth emphasising that in light of the current changes in lexicography and terminography, mentioned in Section 1, it seems even more important to define and study the historical development and the current state of both lexicography and terminography in order to solidify their academic identity and eventually establish firm foundations for future solutions (or a new science). Accordingly, studies into traditional lexicography/ terminography should continue, not least because in some countries traditional (book) terminographic products are still the prevailing type of reference work (see M. Łukasik et al. 2018¹¹, 2018b).

¹¹ In the author's previous studies concerning specialised dictionaries with English and Polish (M. Łukasik 2014), the data suggested a decrease in the number of specialised dic-

3. Some theoretical findings of metaterminography

The following considerations address some fundamental issues of terminography. In particular, the discussion should provide some solid foundations for metaterminographic studies and outline directions of their development. It should also contribute to the solidification of terminography as an autonomous discipline.

3.1. Terminographic work as text and a cognitive and linguistic tool¹²

A number of scholars have identified dictionaries (as types of) texts (S. Gajda 1982: 173, W. Miodunka 1989: 215, A. Wilkoń 2002: 259–266; W. Frawley 1989, among others). It can therefore be assumed that terminographic works are types of specialised texts. This assertion produces some important consequences for some other metaterminographic findings.

1. In professional (specialised) communication specialised texts are the genuine means of specialised knowledge transmission¹³. Specialised texts, being language (macro)signs physically realised as signals, are the exponents of the sender's knowledge, which the receiver decodes and then (re)constructs the knowledge transmitted (S. Grucza 2008a: 187; 2008b). Consequently, neither lexicographic nor terminographic works include information (information is encoded/ decoded by senders-receivers); at most, they are complex signals, which are recognised as data, texts, dictionaries, etc. by individual users (cf. P.A. Fuertes-Olivera/ S. Tarp 2014: 57–61, H.E. Wiegand 2000).

2. Since terminographic works are carriers of terms (which can be regarded as the smallest texts representing individual concepts or even singular specific characteristics), they become macrotexts and exponents of larger quanta of specialised knowledge (cf. B. Schaefer 1994: 15)¹⁴. The continuity of knowledge representation in a terminographic work can be seen as a fulfilment of one of the features of text (see the definition of text provided by K. Wyrwas/ K. Sujkowska-Sobisz 2005: 175–176, W. Frawley 1989).

3. Since terms possess a dual nature of a sign of concepts (representing (specialised) knowledge) and a unit of text (representing language knowledge), the terminographic work exists simultaneously as a cognitive and linguistic tool (cf. S. Nielsen 2018).

tionaries published since 2005, a drop which T. Piotrowski has also noted for general dictionaries and attributed to a possible shift towards the digital medium (not necessarily digital dictionaries) (T. Piotrowski 2016). In newer studies encompassing all specialised dictionaries published in Poland since 1990, the trend is not observed (M. Łukasik et al. 2018).

¹² The discussion presented in this section is based on (M. Łukasik 2012; 2014b) and partially on (M. Łukasik 2010: 10–19).

¹³ Phrases such as knowledge transfer or knowledge transmission are used metaphorically here.

¹⁴ Some scholars suggest that the dictionary is not a text itself, but is composed of a number of various (genres of) texts (H. Bergenholtz/ S. Tarp/ H.E. Wiegand 1999: 1763).

4. There are certain prerequisites that a terminographic work – a knowledge exponent and text – has to satisfy in order to fulfil its design function. The foremost qualities are those of conceptual integrity and textual coherence and cohesion. In other words, any haphazard aggregation of terminology (or more generally, specialised vocabulary) cannot be considered a terminographic work (see M. Łukasik 2015a: 79).

5. Knowledge transmission can be realised on various levels in a terminographic work. On the megastructural level, such knowledge transfer is mainly conveyed by encyclopaedic passages within the outside matter, while on the macrostructural level it is reflected by the choice of terms and sometimes their arrangement in thematic sections. For example, the inclusion of a term in a lemma list is already an indication of its cognitive value, while the overall choice of terms in a terminographic work outlines its conceptual frame. On the mediostructural plane knowledge structure is indicated by the referencing system between semantically related terms or parts of the whole work, while on the microstructural level knowledge is transferred through the various types of concept/ term explanation, including definitions and extended explications, graphical elements (including iconic, illustrative or symbolic representation), thesaurus part, etc.

6. Therefore, it is possible to distinguish between terminographic surface level (i.e. that of the compositional and textual level in a terminographic work) and terminographic deep level (i.e. the conceptual system beyond the surface level elements). The two levels are strictly interdependent and must be considered together when drafting a plan of a terminographic work. Accordingly, specific types of knowledge (or knowledge of different disciplines) will result in different surface structure solutions and can also limit the possibilities of knowledge representation in a terminographic work, whose surface level elements are not capable of such knowledge representation (e.g. highly abstract mathematical constructs, such as a multidimensional space).

7. Construction of a terminographic work should proceed in a semasiological – onomasiological order. High quality source texts should be the basis for terminographic data extraction (the semasiological phase), while their analysis, evaluation and collation should be subjected to the conceptual requirements (the onomasiological phase). In any case, construction of a terminographic work should be preceded by a meticulous design stage, which will define the content and structure of the future product.

8. Terminographic works will exhibit cognitive and linguistic features to a varying degree on the horizontal and vertical plane as a consequence of varying extension (scope) and specificity of terms. Therefore, a choice of terms and the manner of their presentation in a terminographic work will define the global characteristics of the work as a macrosign (macrotext) and give rise to specific typology of terminographic works. However, it may not be possible to draw clear boundaries between specific types of terminographic works, which on the one hand gives rise to hybrid constructions, while on the other hand may require the adoption of the prototype model (rather than a binary typology) for a differentiation between terminographic products.

9. Terminographic works usually do not stand independently of other similar works; some are based on their predecessors, some constitute new editions while others make up editorial or thematic series. A special case here is the so-called terminographic series, which is defined as a set of dictionaries that present various stages of development (and specific aspects) of a terminological lexicon (J. Lukszyn 2004: 59). In order to maintain the conceptual integrity of the entire series, the same terminographic principles have to be observed in all works. In fact, any terminographic activity should follow unified terminographic principles so as not to distort specialised knowledge in respective terminographic works.

10. Both linguistic and cognitive features of a term or any other specialised vocabulary unit, including professional slang (M. Łukasik 2017d), should help the user correctly link a given lexical unit to a specialised concept and appropriately use the former in a particular context (linguistic and extralinguistic). This leads to a conclusion that a well-compiled terminographic work should exhibit cognitive-linguistic cohesion and coherence.

3.2. General terminographic principles¹⁵

As has already been mentioned, the ultimate goal of all metaterminographic research is the production of ever better terminographic works (the notion of quality will be discussed in Section 3.4.). If the research procedures follow the adopted scientific paradigm, the results of a study directly or indirectly point to such terminographic solutions (terminographic techniques, parameters, data presentation modes, etc.) that eventually allow the construction of a better work.

There are two principal rules that come to the fore in any practical undertaking and also in most metaterminographic studies, in which they should constitute primary evaluation benchmarks. These are: (1) the principle of the primacy of users' needs, (2) the principle of non-distorted (specialised) knowledge transmission (M. Łukasik 2014a: 141ff.).

1. As a point of departure it needs to be emphasised that the two principles are complementary and should be considered and applied together.

2. Lexicographers and terminographers have long recognised the necessity of meeting users' needs in their reference works. Accordingly, it is safe to claim that lexicography and terminography have always been anthropocentric (cf. M. Lisiecka-Czop 2016: 56).

3. Often users' needs are given priority in metaterminographic considerations, with knowledge transmission issues either treated marginally or absent altogether. Meanwhile, there a number of variables that need to be taken into consideration in relation to the conceptual quality of each terminographic work. This distinguishes terminographic works from general language lexicographic works, in which the naïve reflection of the world (and language) is justified.

¹⁵ The section presents the most important results of a discussion presented in (M. Łukasik 2014a).

4. As regards the research of users' needs, the 'theory of lexicographic functions' seems to be the most comprehensive attempt to capture the issues arising at the user's end in relation to a lexicographic work (S. Tarp 2008). Advocated by P.A. Fuertes-Olivera and S. Tarp (2014) or S. Nielsen (2018) in relation to specialised lexicography, the paradigm may be a good foundation for most user studies contemplated vis-à-vis dictionary functions. It is worth emphasising that metaterminography needs to evaluate users' characteristics (such as general and specialised knowledge, language level, dictionary skills, etc.) and their needs arising from specific situations which necessitate the use of a terminographic work. For example, if a terminographic work is addressed to students/ apprentices of a profession, then a terminographic work should include non-standard (=slang) vocabulary, as such lexis may help to maintain communication inside the discourse community and – on a pragmatic level – may be more informative than the terms proper (M. Łukasik 2017d).

5. The principle of non-distorted knowledge transmission stems from the primary role of any terminographic work, i.e. that of a knowledge exponent in a specialised communication (see the preceding section). However, the capacity to transmit a non-distorted knowledge will depend on a number of factors, including:

- the type of specialised knowledge to be reflected in a terminographic work (e.g. more formalised types of knowledge may be less amenable to effective language-based presentation in a terminographic work, and therefore may require new forms of terminographic data presentation);
- the development of a particular (national) LSP, and in particular a terminological macrosystem (e.g. the degree of the terminological macrosystem compatibility with that of the primary or other world-wide terminological system);
- the research culture of the language/ discourse community in question.

Additionally, in order to fulfil the primary terminographic principles listed above, three methodological principles need to be observed, namely (M. Łukasik 2014: 146):

- (1) the principle of objectivisation of terminographic activity by, *inter alia*:
 - (i) using appropriate corpus data and corpus methodology;
 - (ii) applying the results of systematic studies of terminographic works (in order to establish a benchmark for quality evaluation and to avoid the faulty, and apply successful terminographic solutions in the practical enterprise of compiling terminographic works);
 - (iii) inviting experts to take part in terminographic undertakings (including metaterminographic projects).

(2) the principle of adequate source text selection, i.e. selection of texts exhibiting the required terminographic value (as manifested by cognitive and linguistic parameters; see M. Łukasik 2005; 2017c: 55–58; 2018b: 149–152);

(3) the principle of optimal presentation of terminographic data at all structural levels of a terminographic work. Such optimum set of parameters observe the principles of users' needs and non-distortion of specialist knowledge and take other var-

ables into account, such as commercial project viability (if applicable) (see M. Łukasik 2009).

3.3. Defining notions in terminography¹⁶

As has been demonstrated in the first paragraphs, defining fundamental concepts in a discipline is a *sine qua non* condition of establishing its scholarly status. However, similarly to other fields in the humanities, lexicography and terminography are fraught with imprecision. The least clear-cut terms pertain to:

- a. general science/ other disciplines (theory, model, modelling, method, methodology, approach, tool, craft, concept/notion, knowledge (representation), meaning/sense information, data, formal (e.g. approach), value, function, environment, etc.);
- b. lexicographic/ terminographic (sub)disciplines (conceptology, infology, informology, lexicography, terminography, reference science, ideography, pedagogical lexicography/ terminography, etc.);
- c. products (dictionary, lexicon, encyclopaedic dictionary, encyclopaedia, etc.);
- d. components of products (definition, collocation, illustration, data, etc.);
- e. features of products (big, small, concise, comprehensive, contemporary, special/ specialised, explicative, normative, coverage, etc.);
- f. activities ((semi-automatic) compilation, construction, excerption, etc.);
- g. tools (corpus);
- h. evaluative layer (user-friendliness, usefulness, poor/ high quality, representativeness, etc.).

Based on a small corpus study of 282 randomly selected papers from EURALEX Proceedings (1.4 million running words), the list is by no means complete. However comparison of the definitions of the terms across a variety of sources, such as journal papers, monographs, general and specialised dictionaries as well as encyclopaedias (including those devoted to lexicography: I. Burkhanov 1999, R.R.K. Hartmann/ G. James 2002), has revealed considerable discrepancies between the scope and use of the terms in question. By way of example, the term ‘corpus’ is sometimes used loosely to denote ‘any body of texts’, as opposed to the modern meaning derived from contemporary corpus linguistics¹⁷. While it seems very difficult to agree on the precise meaning of some terms, which might anyway be a characteristic feature of academic discussions in the humanities, metalexicographers and metaterminographers should endeavour to precisely define their own discipline.

In the course of his detailed metaterminographic studies, the author has come across a variety of ambiguous terms. A thorough analysis of the terms in question has produced the following findings, applicable on a general metaterminographic level¹⁸:

¹⁶ The section is partially based on findings in (M. Łukasik 2016; 2017c; 2018b).

¹⁷ A *corpus-based dictionary* is in such instances of questionable quality.

¹⁸ The methodological findings will be presented in the forthcoming paper.

1. A number of notions found in metaterminographic considerations can be viewed from a variety of angles, which may reveal their multi-faceted and/or multi-dimensional nature. In particular, it is important to determine the ontological status of notions and their interdisciplinary connections. By way of example, both lexical minimum and terminological minimum can be understood as a person's language competence, a relative measure of such competence, a specific type of reference work, a glottodidactic tool and a resource. Therefore, theoretical and practical (methodological) discussions related to both types of minimum should involve findings of several fields, including (cognitive) linguistics, quantitative linguistics, glottodidactics, terminology, information/ computer science, etc. (M. Łukasik 2018b: 162). Also, in-discipline interconnections and overlapping should be recognised. For example, it may be difficult to draw a line between theoretical and methodological part of terminographic activity.

2. It is important to be aware of both interlingual and conceptual differences of the terms used. For example, the terms 'lexical minimum' and 'terminological minimum' are more prevalent in Slavic languages, while in English more frequent expressions include 'core vocabulary/ terminology', 'basic vocabulary/ terminology' or 'minimum vocabulary/ terminology' (M. Łukasik 2017c: 48). Moreover, each of the terms carry a slightly different meaning, which is a result of local research achievements with regard to the subject-matter discussed as well as specific research culture. It is therefore necessary to trace back the history of a term and juxtapose its local research context (and hence meaning) with the international (e.g. mainstream) research context.

3. Even if English is the dominant language in metalexigraphic and metaterminographic discussions at international level, it is not always capable of conveying subtle meaning differences inherent in terms in other languages (cf. a critical review of H.E. Wiegand et al.'s *Dictionary of Lexicography and Dictionary Research. Band 1*, L.-L. Pálfi/ B. Kristiansen 2010; see also M. Rundell 2012: 56–57).

4. A number of notions in (meta)terminography will exhibit prototypical characteristics. An illustrative example comes from the various types of specialised dictionaries, which fulfil specific criteria to a greater or lesser extent (e.g. the representation of the conceptual layer in a dictionary).

3.4. Quality in terminography¹⁹

The notion of quality seems to be a common denominator of the majority of theoretical and methodological discussions on lexicographic and terminographic issues. This is a consequence of the ultimate goal of the entire metalexigraphic and metaterminographic activity (production of better lexicographic/ terminographic

¹⁹ An outline of the major issues concerning the notion of quality in terminography is presented in (M. Łukasik 2015a), but a number of findings also transpire from the author's other studies, in particular (M. Łukasik 2015b, 2016a, 2016b, 2017b, 2017c, 2018a, 2018b). More comprehensive considerations were presented in a paper *The Notion of Quality in Polish Terminography*, presented at the "Gloss to lexicography" biennial conference in Warsaw (24–25 September 2018). Conference proceedings are expected in 2019.

works). The term ‘quality’ has become a useful assessment benchmark, which is yet to be comprehensively defined. In this section an attempt is made to briefly outline the issues connected with lexicographic and terminographic quality.

1. Literature review has revealed that the notion of quality is primarily directly or indirectly used in relation to lexicographic or terminographic works. Therefore, authors talk about poor/ low quality of, or even bad, lexicographic or terminographic works or components/ contents of these. Such discussions often co-occur alongside desiderata of how such quality should be improved, assured or enhanced.

2. In a number of cases, the notion of quality is implied by the use of other broad and vaguely defined (or chiefly non-defined) notions of ‘usefulness’, ‘user friendliness’, ‘relevance’ or ‘practicality’.

3. Some fundamental principles of quality assessment can be derived from the definition of the notion found in general dictionaries. According to the online *Oxford Dictionaries* quality is:

- (i) The standard of something as measured against other things of a similar kind; the degree of excellence of something.
- (ii) A distinctive attribute or characteristic possessed by someone or something (Oxford Dictionaries 2014).

4. According to the definition (i), it is impossible to evoke quality without undertaking evaluation of some kind. For example, in the case of lexicographic or terminographic works, it is only possible to measure quality in relation to other dictionaries of similar kind. This requirement precludes comparisons of typologically unrelated works (such as lexicographic vs. terminographic works), although partial comparisons are possible in relation to works that share certain characteristics (such as e.g. term coverage in terminological glossaries and term banks). The tools that ensure comparability of works are typologies (of existing or theoretically-envisioned works) and lexicographic/ terminographic parameter matrixes (in principle, such matrixes are complete lists of parameters detected in two or more works and juxtaposed against each other). Such matrixes also enable/ facilitate comparisons of specific dictionary parameters.

5. (Meta)lexicographers/ (meta)terminographers usually talk about the quality of: algorithms, analyses (of source data), content, corpora, coverage, data, databases, definitions, descriptions (of several elements), dictionaries, entries, equivalents, illustrative material/ examples, information, lexical material, output, scans, software architecture, source texts, (search) results (also understood as successful completion of tasks for which dictionary consultation was necessary), term extraction, terminology, translation, user-friendly environment, etc.²⁰. Such a wide array of the topics discussed confirms the wide-ranging scope of the definition cited.

6. As a matter of fact, quality measurement can concern any (meta)lexicographic/ (meta)terminographic parameter/ element/ feature/ product²¹, etc. at any stage of lexicographic/ terminographic activity, theoretical, methodological and practical as well as post-marketing one. Therefore, it is possible to undertake

²⁰ Based on the above-mentioned corpus of EURALEX Proceedings.

²¹ Including metalexigraphic/ metaterminographic output, such as e.g. dictionary reviews.

assessment of all (meta)lexicographic/ (meta)terminographic achievements, in both diachronic and synchronic perspective (e.g. against the achievements of a different country, see M. Łukasik 2016b) or only a selection of such achievements. When such evaluation concerns an individual work, quality study amounts to dictionary criticism.

6. Lexicographic/ terminographic quality assessment can be undertaken against theoretical assumptions. Consequently, lexicographic or terminographic models (M. Łukasik 2009), typologies of theoretically-envisioned lexicographic/ terminographic works or specific theoretical findings (also from extra-lexicographic domains) can act as evaluation benchmarks.

7. Generally, each feature, parameter or element is measurable. The division into so-called quantitative (quantifiable) and qualitative (non-quantifiable) features/ elements/ etc. is invalid in quality measurement, as the dichotomy merely suggests different measurement methods and different measurement scales (called strong and weak) (cf. T. Borys 2013: 68–70). Lexicography and terminography are yet to develop a comprehensive and scientific quality assessment scheme and decide in reliable tools.

8. In the modern approach to quality management, quality is ensured at the production stage. By analogy, quality should be assured at all phases preceding the release of a lexicographic/ terminographic work. It may sound trivial, but it is worth repeating that several theoretical and methodological desiderata are not applied in practice, which results in works of inferior quality.

9. Since lexicographic/ terminographic works usually exhibit optimal (rather than ideal) parameters, quality assessment takes the form of a relative evaluation. To maintain scientific rigour, principles and analyses of contrastive studies should be applied (M. Łukasik 2017e).

4. Conclusion

Due to space constraints, this paper has provided only a brief overview of the multitude of theoretical issues important from the perspective of terminography. In particular, an attempt was made to (a) bring to light the current discussion on the academic status of lexicography and metalexigraphy, (b) define the scope of terminography and metaterminography, and (c) identify and discuss some fundamental theoretical matters arising at the intersection of terminographic theory, methodology and practice. Consequently, the author supports the view that metaterminography can and does develop its theoretical foundations, which nevertheless have not yet matured enough to become a full-fledged theory of terminography. However, a theory of both lexicography and terminography is probably the holy grail of metalexigraphy and metaterminography, because, as S. Tarp notes:

A fundamental precondition for raising the quality of specialised lexicographical works is the existence of an advanced theory that may guide the conception and production of such works. However, while specialised lexicographical practice has produced a continuous flow of new results, the corresponding theory has almost been at a standstill during the past two decades (S. Tarp 2012: 123).

The researcher adds that:

Specialised lexicography has produced a big and growing quantity of practical products during the past two decades; however, when it comes to the quality of these products and the underlying theory that has to support and guarantee this quality, specialised lexicography – including terminography – has more than anything else been characterised by twenty years in slow motion (ibid.: 125).

It is no coincidence that the general picture outlined above also reflects the state of Polish terminography. Although some theoretical and methodological proposals have been put forward, metaterminographic studies are yet to fully address some pressing problems, including, for example, comprehensive user and use studies or a full shift towards the digital medium. Polish practical terminography has not made considerable advances either (this includes both the traditional and electronic terminographic works; see M. Łukasik 2017b: 57–58). This certainly calls for an intensified cooperation between theoreticians and practitioners and possibly for a wider access to the theoretical and methodological achievements.

References

- Adamska-Sałaciak, A. (2018), *Lexicography and Theory: Clearing the Ground*. In: “International Journal of Lexicography”, Advance access paper, 1–19 (URL <https://academic.oup.com/ijl/advance-article-abstract/doi/10.1093/ijl/icy017/5098422>). [Accessed on: 22.11.2018].
- Bańko, M. (2001), *Z pogranicza leksykografii i językoznawstwa*. Warszawa.
- Béjoint, H. (2010), *The Lexicography of English*. Oxford.
- Bergenholtz, H./ S. Tarp (eds.), (1995), *Manual of specialised lexicography*. Amsterdam/ Philadelphia.
- Bergenholtz, H./ U. Kaufmann (1997), *A critical survey of dictionaries from a single specialised field*. In: “Hermes” 18, 91–125.
- Bergenholtz, H./ S. Tarp/ H.E. Wiegand (1999), *Datendistributionstrukturen, Makro- und Mikrostrukturen in neuen Fachwörterbüchern*. In: H. Steger/ H.E. Wiegand (eds.), *Fachsprachen. Languages for Special Purposes*. Berlin/ New York, 1762–1832.
- Borys, T. (2013), *Od definicji cechy do zarządzania jakością*. In: “Folia Oeconomica Cracoviensia” LIV, 65–79.
- Bothma, T.J.D./ R.H. Gouws/ D.J. Prinsloo (2016), *The Role of e-Lexicography in the Confirmation of Lexicography as an Independent and Multidisciplinary Field*. In: T. Margalitadze/ G. Meladze (eds.), *Proceedings of the XVII EURALEX International Congress*. Tbilisi, 109–116.
- Burkhanov, I. (1999), *Linguistic foundations of ideography. Semantic Analysis and Ideographic Dictionaries*. Rzeszów.
- Doroszewski, W. (1970), *Elementy leksykologii i semiotyki*. Warszawa.
- Frawley, W. (1989), *The Dictionary as Text*. In: “International Journal of Lexicography” 2(3), 231–248.

- Fuertes-Olivera, P.A./ S. Tarp (2014), *Theory and Practice of Specialised Online Dictionaries: Lexicography versus Terminography* (Lexicographica. Series Maior 146). Berlin/ Boston.
- Gajda, S. (1982), *Podstawy badań stylistycznych nad językiem naukowym*. Warszawa/ Wrocław.
- Gajda, S. (1990), *Wprowadzenie do teorii terminu*. Opole.
- Grochowski, M. (1982), *Zarys leksykologii i leksykografii. Zagadnienia synchroniczne*. Toruń.
- Grucza, F. (1983/2017), *Zagadnienia metalingwistyki: lingwistyka – jej przedmiot, lingwistyka stosowana*. Warszawa. (S. Grucza/ M. Olpińska-Szkielko/ M. Płużyczka/ I. Banasiak/ M. Łączek/ A. Bonek/ A. Kaleta/ A. Sztuk (eds.) (2017), *Franciszek Grucza, Dzieła zebrane, t. 8: Zagadnienia metalingwistyki. Lingwistyka – jej przedmiot, lingwistyka stosowana*. Warszawa). (URL http://www.iksi.uw.edu.pl/documents/11738337/14640936/FG_Tom_8.pdf). [Accessed on: 22.11.2018].
- Grucza, S. (2008a), *Lingwistyka języków specjalistycznych*. Warszawa. (URL <http://sn.iksi.uw.edu.pl/wp-content/uploads/sites/306/2018/09/SN-3.-Sambor-Grucza-Lingwistyka-j%C4%99zyk%C3%B3w-specjalistycznych.pdf>). [Accessed on: 22.11.2018].
- Grucza, S. (2008b), „*Teksty specjalistyczne*”: *Językowe eksponenty wiedzy specjalistycznej*. In: Ł. Karpiński (ed.), *Kulturowy i leksykograficzny obraz języków specjalistycznych* (Języki specjalistyczne 8). Warszawa, 181–193.
- Hartmann, R.R.K. (2016), *Teaching and Researching Lexicography*. London/ New York.
- Hartmann, R.R.K./ G. James (2002), *Dictionary of Lexicography*. London/ New York.
- ISO 1087-1:2000. *Terminology work – Vocabulary. Part 1: Theory and application*.
- Jackson, H. (2013), *Introduction*. In: H. Jackson (ed.), *Bloomsbury Companion to Lexicography*. London/ New Dehli/ New York/ Sydney, 1–18.
- Lisiecka-Czop, M. (2016), „*Super słownik, polecam!!!*” *Słowniki dwujęzyczne i ich użytkownicy w świetle recenzji konsumenckich na portalach internetowych*. In: “Lingwistyka Stosowana/ Applied Linguistics/ Angewandte Linguistik” 21 (1), 55–70.
- Łukaszyn, J. (2004), *Leksykon specjalistyczny – słownik terminologiczny – seria terminograficzna*. In: J. Lewandowski (ed.), *Leksykografia terminologiczna – teoria i praktyka* (Języki specjalistyczne 4). Warszawa, 55–64.
- Łukasik, M. (2005), *Teksty terminoosne – filtry terminograficzne – stopień dokładności tezaury*. In: J. Lewandowski/ M. Kornacka (eds.), *Teksty specjalistyczne w kontekstach zawodowych i tłumaczeniach* (Języki Specjalistyczne 5). Warszawa, 155–164.
- Łukasik, M. (2007), *Angielsko-polskie i polsko-angielskie słowniki specjalistyczne. Analiza terminograficzna*. Warszawa.
- Łukasik, M. (2009), *Idealny – optymalny – maksymalny słownik terminologiczny*. In: M. Łukasik (ed.), *Na drodze wiedzy specjalistycznej* (Publikacja Jubileuszowa 1). Warszawa, 64–78.

- Łukasik, M. (2010), *Teksty specjalistyczne a konstruowanie terminograficzne*. Warszawa [unpublished PhD Thesis].
- Łukasik, M. (2012), *Terminological dictionary as a comprehensive cognitive and linguistic tool*. In: "Language in Different Contexts: Research papers = Kalba ir kontekstai" 6 (1), 98–108.
- Łukasik, M. (2014a), *Zasady i narzędzia porządkowania terminograficznego*. In: W. Zmarzer/ T. Michta (eds.), *Narzędzia pracy lingwistycznej*. Warszawa, 140–170.
- Łukasik, M. (2014b), *Spójność w słowniku terminologicznym*. In: M. Kornacka (ed.), *Spójność tekstu specjalistycznego (Studi@ Naukowe 23)*. Warszawa, 69–79.
- Łukasik, M. (2015a), *Quality of multilingual specialised lexicography in Poland*. In: "Cognitive studies| Études Cognitives" 15, 79–95.
- Łukasik, M. (2015b), *Na krawędzi Wszechświata. Analiza terminograficzna słowników z terminologią astronomiczną*. In: K. Fordoński/ Ł. Karpiński (eds.), *W dialogu języków i kultur IV*. Warszawa, 29–45.
- Łukasik, M. (2016a), *Specialised Pedagogical Lexicography: A Work in Progress*. In: "Polilog. Studia Neofilologiczne" 6, 211–226.
- Łukasik, M. (2016b), *A Short History of Polish-Ukrainian Terminography*. In: "Cognitive Studies| Études Cognitives" 16, 65–89.
- Łukasik, M. (2017a), *Polish Specialised Lexicography During WWII*. In: R. Lipczuk/M. Lisiecka-Czop/ K.H. Ramers (eds.), *Sprache und Wörterbücher in Theorie und Praxis. Lexikografische und textlinguistische Fragestellungen (Stettiner Beiträge zur Sprachwissenschaft 7)*. Hamburg, 105–124.
- Łukasik, M. (2017b), *Polska szkoła terminograficzna*. In: M. Małachowicz/ S. Grucza (eds.), *Polskie i europejskie nurty terminologiczne*. Warszawa, 27–70.
- Łukasik, M. (2017c), *Lexical Minimum (Re)Defined*. In: "Lingwistyka Stosowana/ Applied Linguistics/ Angewandte Linguistik" 23 (2), 47–63.
- Łukasik, M. (2017d), *Defining the entry unit in a dictionary of non-standard professional vocabulary*. In: "Polilog. Studia Neofilologiczne" 7, 301–314.
- Łukasik, M. (2017e), *Contrastive terminography*. In: „Cognitive Studies| Études cognitives” 17, 1–14.
- Łukasik, M. (2018a), *Polish marine dictionaries. A metalexigraphic perspective*. In: M. Lisiecka-Czop/ K. Sztandarska/ B. Utermöhlen (eds.), *Sprachen in fach- und berufsbezogenen Kontexten (Stettiner Beiträge zur Sprachwissenschaft 9)*. Hamburg, 139–165.
- Łukasik, M. (2018b), *New Pathways to Terminological Minimum*. In: "Applied Linguistics Papers" 25 (2), 133–168.
- Łukasik, M. (red.) (2018c), *Bibliografia słowników specjalistycznych (1990–2017)*. Słupsk. (URL <http://leksykografia.pl/aktualnosci/news/bibliografia-sloownikow>). [Accessed on: 25.11.2018].
- Łukasik, M./ M. Łukasik/ D. Nowacka/ M. Żbikowski (2018), *Polska praktyka terminograficzna*. In: „Komunikacja specjalistyczna” (in print).
- Miodunka, W. (1989), *Podstawy leksykologii i leksykografii*. Warszawa.
- Nielsen, S. (2018), *LSP lexicography and typology of specialized dictionaries*. In: J. Humbley/ G. Budin/ Ch. Laurén (eds.), *Languages for Special Purposes: An International Handbook*. Berlin/ Boston, 71–95.

- Pálfi, L.L./ B. Kristiansen (2010), *Review of H.E. Wiegand et al.'s Wörterbuch zur Lexikographie und Wörterbuchforschung / Dictionary of Lexicography and Dictionary Research. Band 1 / Volume 1: Systematische Einführung / Systematic Introduction + A–C. Berlin/ New York*. In: "International Journal of Lexicography" 23(4), 491–502.
- Piotrowski, T. (1994a), *Z zagadnień leksykografii*. Warszawa.
- Piotrowski, T. (1994b), *Problems in bilingual lexicography*. Wrocław.
- Piotrowski, T. (2013), *A Theory of Lexicography – Is there one?*. In: H. Jackson (ed.), *The Bloomsbury Companion to Lexicography*. London/ New York, 303–320.
- Piotrowski, T. (2016), *Zmiany w najnowszej leksykografii polskiej*. In: M. Zaśko-Zielińska/ M. Misiak/ J. Kamieniecki/ T. Piekot (eds.), *Lingua et gaudium*. Księga jubileuszowa ofiarowana profesorowi Janowi Miodkowi. Wrocław, 431–438.
- Rudnicka, E. (2016), *Istotne zmiany w polskiej refleksji metaleksykograficznej*. In: "Prace Filologiczne" LXIX, 399–428.
- Rundell, M. (2012), *'It works in practice but will it work in theory?'* *The uneasy relationship between lexicography and matters theoretical*. In: R.V. Fjeld/ J.M. Torjusen (eds.), *Proceedings of the 15th EURALEX international Congress 7–11 August, 2012, Oslo*. Oslo, 47–92.
- Schaeder, B. (1994), *Zur einer Theorie der Fachlexikographie*. In: B. Schaeder/ H. Bergenholtz (eds.), *Fachlexikographie: Fachwissen und seine Repräsentation in Wörterbüchern*. Tübingen, 11–42.
- Tarp, S. (2007), *Lexicography in the Information Age*. In: "Lexikos" 17, 170–179.
- Tarp, S. (2008), *Lexicography in the Borderland between Knowledge and Non-Knowledge: General Lexicographical Theory with Particular Focus on Learner's Lexicography*. Tübingen.
- Tarp, S. (2010), *Reflections on the Academic Status of Lexicography*. In: "Lexikos" 20, 450–465.
- Tarp, S. (2012), *Specialised lexicography: 20 years in slow motion*. In: "Ibérica" 24, 117–128.
- Tarp, S./ K. Fisker/ P. Sepstrup (2017), *L2 Writing Assistants and Context-Aware Dictionaries: New Challenges to Lexicography*. In: "Lexikos" 27 (1), 494–521.
- Wiegand, H.E. (1984), *On the Structure and Contents of a General Theory of Lexicography*. In: R.R.K. Hartmann (ed.), *LEXeter '83 Proceedings. Papers from the International Conference on Lexicography at Exeter, 9–12 September 1983*. Tübingen, 13–30.
- Wiegand, H.E. (1988), *Was eigentlich ist Fachlexikographie? Mit Hinweisen zum Verhältnis von sprachlichem und enzyklopädischem Wissen*. In: H.H. Munske (ed.), *Deutscher Wortschatz. Lexikologische Studien*. Ludwig Erich Schmitt zum 80. Geburtstag von seinen Marburger Schülern. Berlin/ New York, 729–790.
- Wiegand, H.E. (1998), *Wörterbuchforschung. Untersuchungen zur Wörterbuchbenutzung, zur Theorie, Geschichte, Kritik und Automatisierung der Lexikographie*. 1. Teilband. Berlin/ New York.
- Wiegand, H. E. (2000), *Wissen, Wissenrepräsentationen und Printwörterbücher*. In: U. Heid/ S. Evert/ E. Lehmann/ Ch. Rohrer (eds.), *Proceedings of the Ninth*

EURALEX International Congress, EURALEX 2000, Stuttgart, Germany, August 8th–12th, 2000. Stuttgart, 15–38.

Wilkoń, A. (2002), *Spójność i struktura tekstu*. Kraków.

Wyrwas, K./ K. Sujkowska-Sobisz (2005), *Mały słownik terminów teorii tekstu*. Warszawa.

Żmigrodzki, P. (2005), *Wprowadzenie do leksykografii polskiej*. Katowice.