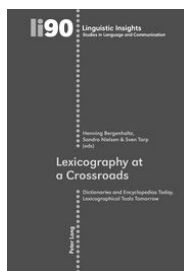**PIOTR TWARDZISZ**
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Henning Bergenholtz, Sandro Nielsen & Sven Tarp (eds)
LEXICOGRAPHY AT A CROSSROADS. DICTIONARIES AND ENCYCLOPEDIAS TODAY, LEXICOGRAPHICAL TOOLS TOMORROW

Peter Lang 2009, Bern, 372 pages.

The reviewed book is a collection of 14 articles which reflect recent research in lexicography. The articles have been collected and edited by three prominent scholars in the field of lexicography: Henning Bergenholtz, Sandro Nielsen and Sven Tarp, all three professors at Aarhus University and authors of numerous publications. As the very title of the book suggests, research in lexicography has come to a point where it is necessary to describe the state-of-the-art in the field and to put forward proposals for future research.

As a general observation, the editors invoke two competing strands of theoretical lexicography: one focusing on the description of existing dictionaries and the other concentrating on the dictionary and the user. These two areas of research are claimed to have come to a point from which new directions are needed. Indeed, the contributions can be divided into two general groups: one containing those articles that deal with general lexicographic issues and the other including those that focus on specific dictionary projects. One of the most important observations made by the editors is that the papers demonstrate a theoretical dichotomy, or even a gap, which, in the words of the editors, is inappropriate. Therefore, in order to fill this gap, one needs to take stock and focus on the future theoretical course that must be set.

The collection of articles is a follow-up of the international symposium: "Lexicography at a Crossroads: Dictionaries and Encyclopedias Today, Lexicographical Tools Tomorrow", hosted by the Centre for Lexicography, Aarhus University in Denmark, 19-21 May 2008. The aim of

this enterprise was to draw the attention of scholars working in the field to the future theoretical course of lexicography. The meeting was attended by scholars from around the world. The conference had two specific goals: (1) the discussion of theories and principles relevant to printed and electronic dictionaries and encyclopedias, and (2) the establishment of an international research network. In the concluding discussion rounding off the symposium divergent opinions were voiced concerning the issues under consideration.

One way of improving the quality of future dictionaries, the editors note in the introduction, is to develop bilingual dictionary generation systems for computer assisted dictionary compilation. Although the editors state that contemporary electronic dictionaries are becoming much more than electronic versions of paper dictionaries, it remains debatable in the light of the observations made in some of the articles included in the volume. A few authors make it quite clear that despite innovative features, the contents of most pocket electronic dictionaries are the same as printed dictionaries. The not-too-futuristic visions drawn in this volume assume that the optimal dictionary would be a hybrid of printed and electronic versions with innovative search functions and user-friendly interfaces. Most probably, the new inventions will involve a fuzzier boundary between PDAs, palm-top PCs, mobile phones and pocket electronic dictionaries. Static sense ordering, currently prevailing, should be replaced by a dynamic adjustment of sense ordering, which presumably involves a closer collaboration with artificial intelligence systems in electronic dictionaries. The editors seem to have found the answer to the question why lexicography has reached a crossroads. Apparently, lexicographers are not certain how to implement new technological findings to lexicographical work. However, with the potential shift from printed and traditional electronic dictionaries to online reference tools, the outlook for the future is bright.

Not only is the discipline "at a crossroads", according to Sven Tarp, but it also suffers a kind of "identity crisis" (p. 17). If so, the question of the placement of lexicography among other related disciplines seems a necessity. Interestingly, Tarp doubts whether assigning lexicography to applied linguistics and treating it as its part should be considered correct. In addressing the issue of identity crisis, he notices some kind of schism between the majority of the dictionaries compiled at present and the most advanced lexicographic theories which have made their presence in lexicographic practice only symbolically. Furthermore, Tarp proposes that lexicography be viewed as an independent research discipline and pursued outside of linguistics (which remains largely undefined in the reviewed publication), as the two disciplines have two completely different subject fields.

With reference to Tarp's claim that lexicography is a science, one may have certain reservations. While it may seem beyond dispute that lexicography "is rooted in the form of concepts, categories, theories and hypotheses" (p. 23), still it is not clear whether this is sufficient to render

lexicography a science. What is even more dubious is the fact that, in Tarp's words, lexicography is a science because it "has its own subject field: dictionaries and other lexicographic works, [...], the production, composition and usage of these works [...]" (p. 22). The compilation, production, not to mention, usage of dictionaries do not have to be scientific especially that many academic and non-academic publishers deal with the production of such works and that the production process does not have anything to do with science even defined most loosely. Also, the fact that a given discipline has its own subject field (without it, the discipline would not exist), does not necessarily make it a science.

Presumably the most important of Tarp's observations is his comparison of new electronic devices to just faster horses in the sense used by Henry Ford at the beginning of the 20th century. Apart from being faster to access, their content is the same as what it was before. Tarp claims that "lexicographic Model T Fords" are both needed and possible (pp. 28-29). His proposals are to make full use of the interactive possibilities of the electronic media, to base search criteria on associations, and to replace traditional dictionary articles containing fixed structures with articles containing dynamic data, unique for each search related to a specific type of user in a specific situation. Given this, Tarp proposes a completely new discipline which he calls "information and data accessology" (p. 29).

The volume contains a number of articles which deal with more 'regional' issues. Yukio Tono describes types of pocket electronic dictionaries in Japan. Given the traditional notion of the high-tech advancement of this country, it should come as no surprise that the area of pocket electronic made-in-Japan dictionaries attracts extra attention. After giving a brief historical sketch, the author presents the market situation with particular attention to its size. Target users are classified as: home users, students, professional and business persons, and elderly and handicapped people. Further, the author classifies the products according to their functions, e.g. multi-volumes and multi-titles, various search functions and graphics. Again, a comparison between electronic devices and their paper equivalents is made. Regrettably, as noted by Tono, despite modern features, the contents of most pocket electronic dictionaries are very similar to, if not the same as, printed dictionaries. As an interesting feature of this article, one needs to mention Tono's discussion of functions that are unique to pocket electronic dictionaries made in Japan, which is not a sole manufacturer of such dictionaries in Asia. In conclusion, the author makes the point of increasing integrity among pocket electronic dictionaries and a growing fuzzy boundary between different products.

Similarly, a few other authors attend to rather 'regional' issues. Serge Verlinde and Jean Binon offer another critique of modern electronic dictionaries in France which do not take full advantage of the added value offered by electronic support. The point being made is that apart from some interesting functionalities (e.g. the pronunciation of words, or research

functionalities on the whole text), the electronic versions focus mainly on the accumulation of resources. Another 'peripheral' issue, namely the case of dictionaries in Brazil, is dealt with by Philippe Humblé. Brazil is at a linguistic crossroads mainly because it is growing economically and it is growing demographically and it has been changing constantly over the last 30 years. The author informs the reader that Brazil has four fully-fledged general dictionaries. By contrast, languages with strong lexicographic traditions have only one or two general comprehensive dictionaries (Dutch, French, German, Italian, British). Roughly within the 'regional' area one can place the article by Raja Saravanan, who pronounces also Indian lexicography being at a crossroads. Importantly for the student-reader, Saravanan discusses the microstructure and macrostructure of a dictionary as well as the importance of semantics, especially lexical semantics, for the compilation of dictionaries. Apart from focusing on the dictionary type in general and in particular, this article is an essential read for students because of its discussion of the structure of an entry. A somewhat different 'regional' theme is taken up by Patrick Leroyer in his article discussing new information tools for tourists, who need fast, easy and situation-adapted access to experiential data, including cultural instructions and recommendations. As conventional lexicographic tools for tourists focus exclusively on communicative data, their purpose cannot be fulfilled for users with no or very little previous knowledge of the language, notes Leroyer. He proposes a metamorphosis of existing lexicographic tools for tourists in particular and of user-needs adapted information tools in general, using three transformational strategies: localisation, functionalisation and lexicographisation (i.e. setting up flexible, external and internal search routes in order to provide easier and faster access to needed data). The idea that lexicographic products must be regarded as utility products is pronounced very strongly in this contribution.

A special place in the volume under discussion is occupied by the articles addressing the issue of Internet appliances. In the twenty-first century the most relevant development in the space of dictionaries and encyclopedias is the advent of *Wikipedia*, claims Gerard Meijssen. He also alerts the reader to a few other Internet projects worth mentioning: *Logosdictionary* (one of the oldest dictionary projects on the Internet), *WordNet* (in practice a monolingual resource) and *OmegaWiki* (a reaction to the projects that were around at the time). According to Pedro A. Fuertes-Olivera, *Wiktionary* is a prototype of collective free multiple-language Internet dictionaries. Internet dictionaries can be divided into two main types: *institutional Internet reference works* and *collective free multiple-language Internet reference works* (e.g. *Wikipedia, Wiktionary, OmegaWiki*). *Wiktionary* receives special attention in this article. It favours interactivity by including forums and discussion rooms such as the functionality 'Talk', which is a kind of chat for making comments on the entries, asking questions, receiving answers, etc. It includes the link 'All

languages' which contains a kind of table of contents of the data included for the language covered. It offers very simple grammatical data, comprehensible for most users. This chapter touches upon a more general topic, namely the future of the Internet dictionary in view of two opposing forces: democratisation versus exclusivity. A similar theme is taken up by Joseph Dung in his article concerning online dictionaries in a Web 2.0 environment which he approaches from a user-interface perspective. The author acknowledges that the user's perspectives and needs have been taken into account in many lexicographic research projects. However, he notes that very little has been done to analyse online dictionary presentation models. More attention, according to Dung, should be paid to issues of lexical processing, especially in a networked environment. That will require some application of natural language processing (NLP) techniques which, among other things, can guide the dictionary application in learning how a word's co-occurrence with other words in its context contributes to the word's meaning.

The volume also hosts a few papers focusing on the microstructure of a dictionary. Among them, the article by Jón Hilmar Jónsson addresses the issue of the lemmatisation of multi-word lexical units. The practical problem is supposedly well-known, namely under which lemma is a given phrase to be found? Also, a multi-word lexical unit is difficult to spot in a comprehensive entry article. The lemmatisation model described here is based on a phraseological description of Icelandic. The author raises some points regarding the position of multi-word units in a traditional dictionary description and the status of such lemmas compared to single-word lemmas. He rightly points out that "most general dictionaries contain quite a large number of multi-word lexical units which for the most part are hidden behind the single-word lemmas" (p. 165). Jónsson offers some essential arguments for giving multi-word lemmas a considerable role in the lemma file. Also, with reference to the microstructure of a dictionary, Robert Lew ponders over possibilities of sense ordering in, what he calls, multiple-sense entries. As noted by Lew, users tend to stop at the initial sense given. This initial sense does not have to be the one that is sought by the dictionary user on a particular occasion. Traditional sense ordering strategies, such as chronology, frequency, logic, pragmatics, to name but a few, should be substituted by optimal ordering strategies. As there are numerous dictionary users, the same sense ordering will not work best for all of them. Consequently, the author's preoccupation is with the possibility of developing the idea of variable and even dynamic sense ordering. Lew brings to light polyfunctional electronic dictionaries where sense ordering could be adjusted to suit the currently active function. Additionally, there might be a user-selectable option for the different pre-programmed functions. Furthermore, the dictionary might take a more active role and interact with the user to determine the current function, for example, by presenting the user with specific prompts requiring feedback. Last but not

least, the author proposes that the dictionary might be programmed to adjust by monitoring a number of factors in the environment, such as what applications are running in the foreground.

One more common theme in this volume that can be mentioned is the vastness of the discipline under consideration. Viewed narrowly, lexicographers may place themselves in the business of dictionary making, but in the broader sense, as Rufus H. Gouws notes, it is rather the knowledge industry. One ought to be aware of the fact that nowadays dictionaries are not the only sources of lexical information and dictionary users have access to a variety of sources in which similar or related data can also be found. Thus it is becoming increasingly important to be aware of the more general context in which dictionaries function as sources of reference. More on extending the scope of lexicography can be found in the article by Julia Pajzs who writes about the possibility of creating multifunctional lexicographical databases. New opportunities are opening up owing to the ongoing revolution in the field of lexicography caused by the efficient use of computers. Interestingly, Pajzs also makes reference to terminology as a very quickly changing field. To maintain its required up-to-dateness, it is essential for such dictionaries to be utilised primarily online (p. 332). Also in this paper the author touches upon the need for dynamic sense ordering in quickly changing circumstances. However, the strongest accent is placed on the multifunctionality of dictionary databases which should allow unlimited usability for different kinds of users. In turn, to facilitate the use of multifunctional lexicographical databases, highly flexible user interfaces are needed. Finally, Zhang Yihua, discusses the Bilingual Dictionary Generation System (BDGS) which is designed to produce dictionaries out of a lexicographical database. The complexity of the proposed system shows up in its several facets: the computer network as data processing platform, the corpus as linguistic data resources, the lexicographical microstructure as data framework, and the mental lexicon theory as the theoretical basis of that framework in order to build up such a database.

In the closing chapter Birger Andersen and Sandro Nielsen list several questions which the participants of the symposium were trying to answer with more or less success.
Let us then assess those pivotal points around which the entire collection hovers. The question: *Is lexicography a genuine part of linguistics?* is posed as the first one. It must be then essential for the participants of the enterprise. The answer reached is inconclusive, though for the majority it is an independent discipline. No evidence in support of either option has been presented. One may glean from the argumentation offered that it has been decided that linguistics has no part to play in lexicography. However, one can also imagine that a different set of arguments can be brought up in support of the other view. Another question raised, namely *Data collection: The more the better or the less the better?*, has been voted a false dilemma, with the real problem lying somewhere else, that is in the presentation of

the data to the users. A further question such as *Who is the master? The computer, the lexicographer, the database system...?* reflects the constant mental battle emerging out of some of the articles in this volume. It goes with the diminishing role of the lexicographer in favour of the computer (people) and the user (who often becomes a contributor). With the lexicographer still in charge, the process of the 'democratisation' of lexicography and dictionaries cannot be reversed. To the question *Many dictionaries in one system?* the participants say: not 'many' or 'faster', but 'different', which has a direct reference to portable electronic devices made in Japan. *Is the printed dictionary dead or dying?* remains an unresolved issue, as again there are enthusiasts and opponents of the printed dictionary.

The questions *Dynamic data: What is data? Presentation of data for a certain need for a certain user type?* invite a unanimous opinion from the participants. Quite unsurprisingly, the essential problem of dynamic data, they say, does not reside in the storing of the data in the database, but in finding ways of presenting the data dynamically to the users to fit in with the needs of the user in a given user situation.

The volume under consideration is a valuable contribution to the ongoing dispute taking place within lexicography. The articles raise a number of essential issues over which lexicographers from different cultures have different opinions. Presumably the two theses which do not harbour disagreement are the following: (1) lexicography should concentrate on the users' needs and the foreseen functions of the dictionary, and (2) computer technology contributes greatly to the development of lexicographical studies and dictionary-making. With the second point in mind, presumably more effective collaboration is needed between lexicographers and computer people. The articles which stress such necessity do not offer any concrete proposals of improved collaboration between specialists in the two fields. Many people realise that there is insufficient application of the advanced functionalities already available in IT to lexicographic devices. Unfortunately, the volume does not tell us how to narrow the gap.