

**Kyo Kageura.** *The Dynamics of Terminology: A Descriptive Theory of Term Formation and Terminological Growth.* 2002, viii + 323 pp. ISBN 90 272 2328 9 (Eur.) / 1 58811 314 0 (US). Amsterdam/Philadelphia: John Benjamins. Price: €92/US\$92 (Hb.).

This monograph was issued as Volume 5 in the series Terminology and Lexicography Research and Practice, edited by Marie-Claude L'Homme and Ulrich Heid and assisted by Juan C. Sager as Consulting Editor. The Japanese author, Kyo Kageura, does research work at the National Institute of Informatics in Tokyo. His theoretical background and methodological experience in term formation patterns and processes were influenced by intensive cooperation with European terminologists since the 1990s, notably the British linguists Juan C. Sager (Manchester, UMIST) and Yorick Wilks (Sheffield), and R. Harald Baayan in the Netherlands.

The book is devoted to aspects of the description of the dynamics of term formation in Japanese, with focus on intra-term relations of nouns in the domain of documentation, where the author, in his own words (p. 4), is the subject specialist with an "in-depth knowledge". His competence and experience in mathematical statistics are demonstrated in Chapter 7 on "Quantitative Analysis of the Dynamics of Terminology".

The data for the corpus analysis were drawn from the Japanese version (1984) of the joint volume *Terminology of Documentation*, edited by G. Wersig and U. Neveling (1976) in Paris, Unesco. The author gives sensible reasons why he — in contrast to recent terminological studies — decided in favour of a reference book on documentation instead of actual written sources of various text types, particularly articles (cf. p. 4, footnote). Since his aim is to elaborate typical conceptual intra-term relations and also tendencies of terminological growth, random examples of terms from documentation texts were thought insufficient for a representative set of data. Thus, his corpus amounts to 1 228 Japanese lexical items which have a terminological status. They are exclusively nouns consisting of a head or "nucleus" and a modifier element, a "determinant". These nouns constitute the core of the Japanese terminology of documentation. Other word classes or parts of speech such as verbs, adjectives, and adverbs which may equally have a terminological status (J.C. Sager, 1990, speaks of "Entities", "Activities", "Qualities" and "Relations", quoted p. 66f.) have been deliberately discarded.

As his guiding principle the author emphasises that the *whole terminology*, not individual terms, of a target domain should be studied in depth, with the necessary "granularity of description" (p. 32).

It must be taken into account that in the Japanese language constituent elements or morphemes of a lexical item are not indicated "by boundaries between linguistic units such as spaces or hyphens" (p. 4). So the author had first to identify the minimal meaning-bearing linguistic elements which correspond to a morpheme in term formation.

The majority of the terms under analysis consist of two morphemes (50,6%); three morpheme structures amount to 23,0%, and one morpheme terms to 20,0% (p. 5). For all types and models of intra-term conceptual relations the English translation is given. A contrastive analysis of the morphemic structure of documentation terms was clearly not the author's intention.

The book is composed of four parts and divided into ten chapters each of which is closely linked by cross-referencing textual devices which support reader-friendly coherence, such as topic sentences, advance organisers, intermediate summaries and the repetition of key arguments. In this respect, the author follows the tradition of British and American academic writing.

In Part I Kageura provides the "Theoretical Background" of his procedure, gives working definitions of "term", "terminology", "lexical unit", "vocabulary", "concept", "conceptual structure", and "characteristic". The designations "domain" and "subject field", however, appear to be accompanied by a circular definition (p. 10) as both are described as "an area of knowledge", even if the latter is characterised by "the purpose of grouping into conventional categories the concepts considered as belonging together" (p. 10). Unfortunately, the author fails to give a definition or at least an explanation of the domain *documentation* which has yielded the terminology corpus under analysis. Instead, he drops an occasional remark (p. 264) that it differs from "library science". On the other hand, the examples in the term lists quoted in the appendices clearly show numerous overlaps between the two fields.

In a subchapter the author critically assesses "the traditional theory of terminology", in which he shares, to a certain degree, the attitude of R. Temmerman (2000). He deplors that the granularity of conceptual systems described so far in traditional terminology "does not exceed the granularity of semantic or conceptual systems established in non-terminology-related studies" (p. 23). It is therefore his main concern to elaborate a far more subtle and intricate system of conceptual elements which are based on a type-token principle and can be minutely described.

In the following chapter, "The Theoretical Framework for the Study of the Dynamics of Terminology" the author makes an important stipulation which implies that terms as "empirical objects" and "functional variants of words" from the angle of epistemological conditions constitute a category. As linguistic units they exist on the level of parole. As his point of departure he declares "the epistemological precedence of the concept *terminology* over the concept *term* (which implies a criticism of traditional Viennese terminology theory and practice). Thus, terminology as the preceding linguistic inventory, and *not* individual terms as "empirical objects" should be the subject of systematic terminological studies (p. 31).

Kageura then goes on to develop his ideas of "the target and method of the dynamics of terminology", first and foremost the "systematicity or motivated patterns, observed in the construction of the totality of existing terms of the target domain" (p. 34). The term formation patterns may vary in the course of

time so that studies of different synchronic slices of term material will become imperative. This is also an indicator of terminological growth on a diachronic level.

Part II deals with "Conceptual Patterns of Term Formation". The author formulates the assumption "that the main feature determining the systematicity of terminological dynamics is the system of concepts of a domain" (p. 45). After comparing methods in describing word and term formation, he sets out to elaborate conceptual elements suitable for the description of term formation. The formal structure of a complex term is the determinant which precedes the nucleus or head. By way of what traditional word (and term) formation has called "left-hand branching" (Kageura does not use this expression, but means this process), a complex term may be enlarged by another determinant. The constituents are connected by closer or looser relationships (in traditional terminological studies known as "bracketing" which also holds for Japanese).

In the past, conceptual categories were suggested by a large number of authors, as early as by Aristotle. Kageura has recourse to categories set up by Sager, Dungworth and McDonald (1980), R. Jackendoff (1983, 1987, 1990), by J.M. Pugh (1984) and a few other authors. The "correspondences of intra-term relations" are listed in an instructive table on p. 97. One wonders why Kageura, as a supportive aspect, has not taken into account the onomasiological tradition of European authors who composed thesauri of words and phrases of *the general language* (not of terminology) by working out a system of conceptual or notional indicators (P.M. Roget, 1852, for English and F. Dornseiff, 1933, for German are outstanding representatives of philosophical and linguistic attempts to classify concepts underlying the words and phrases of the general language).

As Kageura demonstrates in his corpus of documentation terms, the concepts can be neatly divided into subcategories which constitute the terms. The conceptual elements are represented by a complicated set of abbreviations and listed in a large number of tables including the Japanese terms and their English translations, cf. Chapters 5 and 6.

Part III is aimed at the "Quantitative Patterns of Terminological Growth" and introduces mathematical and statistical methods which are visualised by numerous formulae and diagrams opening up an interdisciplinary perspective. The dynamic patterns of the growth of nuclei, determinants, conceptual categories of determinants and conceptual specification patterns are presented in detailed diagrams. The author draws the conclusion "that binomial interpolation and extrapolation provides a very useful and powerful tool for describing the patterns of terminological growth, which can complement the description of the conceptual patterns of term formation" (p. 245).

Part IV, entitled "Conclusions", resumes and further elaborates a number of arguments discussed in the previous parts. The author repeats his dictum: "we distance ourselves from the precedence of concepts over terms" (p. 250), recommends empirical studies of terminology and locates terminology "some-

where in the middle between general natural language vocabulary and artificial nomenclatures" (p. 251). He emphasises that terminology, due to the systematicity of concepts, has a systematic aspect.

Kageura's book is concluded by several extensive appendices. Appendix A presents the "List of Conceptual Categories" as developed in a subtle diversification in the previous chapters. Appendix B includes "Lists of Intra-Term Relations and Conceptual Specification Patterns". Appendix C provides a "List of Terms by Conceptual Categories" and actually has the character of a Japanese-English glossary. The English equivalents of the Japanese terms may be complex lexemes such as compounds (*lending library*) and derivations (*programmer; translator; archivist*) or simple lexemes/simplicia (*library; serial*). Appendix D consists of a "List of Morphemes by Conceptual Categories" and resembles an abridged thesaurus. This list includes the "conceptual category tag", the Japanese morpheme, the English translation, and the frequency of occurrence in the corpus.

The "Bibliography" covers international publications on terminology, word formation and language statistics, chiefly of the past 40 years. All Japanese names of authors and titles of books appear as transliterations in the Latin alphabet. The last item of the appendix is a combined author and subject index.

The descriptive value and explanatory power of Kageura's conceptual analysis of term formation are of general importance, reaching far beyond the Japanese language and the domain of documentation. As nouns occupy a prominent place in the terminology of any domain, their internal conceptual relations established in the term-formation process, may, in principle, also be expected in other languages, irrespective of their typological or genealogical properties.

Moreover, the author offers the possibility of making predictions based on statistical data as to which term-building patterns will be preferred and become productive for neologisms in a particular domain.

The practical applicability of Kageura's findings is still open to discussion. The term lists in the appendix may be a stimulus to lexicographers and terminographers, and, after a reasonable selection and didactic presentation, the term formation patterns might even lend themselves to teaching terminology in classes of languages for special purposes (LSP).

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