Lexical Semantics for Terminology: An introduction

Marie-Claude L'Homme
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The *Terminology and Lexicography Research and Practice* series by John Benjamins aims to offer readers in-depth studies that report on recent advances in the area of terminology and lexicography. The works collected for this book series cover a wide range of cutting-edge topics such as dynamics of terminologies (see e.g. Kageura, 2012) and terminological variation (see e.g. Daille, 2017), featuring a number of research methodologies such as philosophical, computational and cognitive approaches. Marie-Claude L'Homme's recent contribution to the series *Lexical Semantics for Terminology: An introduction* clarifies the interplay between lexical semantics and terminology, specifically including meaning and concept, term identification, polysemy, equivalence in terminology and so forth. In particular, this monograph highlights the robustness of corpus approaches and elucidates for readers how corpus data can be used to help facilitate quantitative and qualitative analyses within various lexico-semantic models, all of which is an innovative step towards the complement to knowledge-driven approaches.

The book is composed of nine chapters and is organised in a logical manner. Chapter 1 starts with a succinct introduction of why we apply lexical semantics to terminology studies, in which L'Homme emphasises the importance of lexical semantics for terminology studies. Research background in relation to corpus data retrieval and online resources is also briefly introduced in this chapter. Drawing on the General Theory of Terminology (GTT), Chapter 2 deals chiefly with the principles of terminology and the knowledge paradigm. Two assumptions are summarised based on GTT, that is, "knowledge has a structure" and "specialised communication needs to rely on unambiguous linguistic units" (p. 7). With regard to terminology management, L'Homme delineates the rationale of storing/accessing concepts and terms from both intra-lingual and inter-lingual perspectives, and explains, with examples, how concepts are represented and how conceptual relations are encoded in terms of ontology. Chapter 3 looks at terminological data from different perspectives, in which

knowledge-driven approaches and lexicon-driven approaches are compared with illustrative examples. Corpus data is employed to account for lexical semantics principles that help identify the linguistics properties of terms. Some relevant models are also introduced, such as Explanatory Combinatorial Lexicology and Frame Semantics. L'Homme argues that lexicon-driven approaches appear to be more suitable for observing and explaining the behaviour of terms in running texts (this is strongly associated with context) whilst knowledge-driven approaches are more suitable for handling "different kinds of applications in which knowledge modelling is required" (pp. 51-52). Chapter 4 is concerned with the exploration of the nature of term, providing effective criteria for identifying and selecting terms. Given the different approaches to the notion 'term' (e.g. Socioterminology, Textual terminology, Communicative theory of terminology and cultural approach) in the literature, L'Homme views terms as lexical-semantic wholes, or in her own words "lexical units" (p. 68) that are morphologically and syntactically different from linguistic units.

Chapter 5 focuses on the interplay between concepts, meaning and polysemy, and demonstrates two diverse approaches to linguistic content, that is, knowledge-based approaches and lexicon-based approaches, and Chapter 6 looks at the classification of terms with regard to typology. Three main types of terms are summarised and analysed based on their linguistic properties, namely, non-predicative terms, predicative terms and quasi-predicative terms. Non-predicative terms denote entities in reality (e.g. *ocean*, *book* and *computer*) and do not require arguments (i.e. 'obligatory participants' in the linguistics sense), whilst predicative terms denote activities (e.g. *acceleration*, *upload* and *download*), properties (e.g. *dangerous*, *delightful* and *effectiveness*) as well as relations (e.g. *subfield*, *parent* and *associate*), and require arguments. Quasi-predicative terms share the general characteristics of both non-predicative and predicative terms, and essentially denote entities (e.g. *population*, *password* and *developer*) and require arguments. Chapter 7 investigates the relations between concepts and terms, highlighting the differences between knowledge-driven and lexicon-driven approaches. In knowledge-driven approaches, knowledge items interact in conceptual relations that fall mainly into two categories, that is, taxonomic relations (i.e. relations between concepts that have characteristics in common, e.g. *mobile device* and *cell phone*) and partitive relations (relations between concepts that integrate 'parts' into 'wholes', e.g. *smart phone* and *touch screen*). Terminological relations are categorised as paradigmatic relations and syntagmatic relations.

Paradigmatic relations can be interpreted in terms of synonymy, hypernymy, hyponymy and antonymy, with terms belonging to the same part of speech. In contrast, syntagmatic relations look at a kind of co-selection between lexical units, or in other words, collocation, in which terms might not belong to the same part of speech. Based on the distinction between conceptual relations and terminological relations, Chapter 8 expounds the structures derived from the two relations. Conceptual structures emphasise the way of mapping knowledge, for which two prerequisites are essential, that is, a clear distinction between concepts and the corresponding designations (p. 177), and the consensus of concepts (p. 178). Conceptual structures can denote both singular and multiple relations, in which the 'kinship' of different concepts within the structures can be illustrated with graphs such as tree diagrams. Chapter 9 wraps up the book with a detailed discussion of conceptual and terminological relations with regard to multilingualism. An important notion – equivalence, is elicited to denote "a relation established between terms that belong to different languages" (p. 240), and is interpreted respectively from knowledge-driven and lexicon-driven perspectives. Despite the difference of the two approaches, exact equivalence needs establishing to label the same concept across languages or pair terms of different languages to carry the same meaning. Also noteworthy is that corpus approaches can help seek equivalence in running texts (e.g. lexical concordance from parallel corpora), although there might be cases where exact equivalence is not available or cannot be established across languages (e.g. non-equivalence, partial equivalence and structural divergence).

In respect to the contents, L'Homme's present work demonstrates a variety of academic merits by foregrounding different voices in building methodological frameworks and addressing a number of important issues pertaining to the interplay between theoretical assumptions and practical applications. Theories such as the General Theory of Terminology and Explanatory Combinatorial Lexicology are well embedded into critical arguments to guide readers to identify the distinction between different research paradigms in exploring the nature of terms. In this respect, the book under review goes beyond a superficial introductory text of reviewing the state of the art within a particular framework; rather it concentrates more on dichotomous thinking for mapping lexical semantics in specialised domains, such as knowledge-driven approaches and lexicon-driven approaches, conceptual structures and terminological structures, as well as conceptual equivalence and terminological equivalence. In addition, corpus

approaches (e.g. the corpus-based approach and the corpus-driven approach) are employed to perform 'multitasks' in terminology studies, such as finding terms from different texts, locating terms in texts, identifying meanings of terms in context, observing relations between terms, and retrieving collocations that involve terms (see e.g. Feng, 2020). Although terminologists might not rely entirely on corpus data, corpora can still provide useful context information for terminological analysis. In particular, domain-specific research with a corpus approach shows that data processing is the prerequisite for methodological innovations in terminology studies, with the nature of such research gradually becoming 'data-driven' rather than 'knowledge-based' (Szalay and Gray, 2006). Furthermore, thought-provoking further readings at the end of each chapter are not merely a simple list of references, but more of critical reviews that offer a collection of valuable resources pertinent to the topics involved. With such syntheses, readers could become self-motivated to explore, in breadth and depth, more potential scaffolding skills and progressive methods in terminological analysis.

In terms of how the monograph is organised, the text produced is logically sequenced in precise and concise academic language, outlining a detailed framework of researching lexical semantics for terminology. All the key notions are defined clearly with rich background information, and therefore even readers without the expertise in terminology studies would not find the book too hard to follow. Additionally, visualisation techniques are well incorporated into the explanations of theories and principles, which help illustrate the nature of key notions and the rationales of theoretical models to a great extent. In this sense, L'Homme's present work provides an excellent foundation for either in-class instruction or self-study with an extensive account of corpus linguistics. Overall, the book under review can be seen as a welcome contribution to the *Terminology and Lexicography Research and Practice* series, and therefore it is warmly recommended to all those who show an interest in terminology studies.

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Acknowledgements

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