

**Pecman, Mojca (2018): *Langue et construction des connaisSENSES; énergie lexico-discursive et potentiel sémiotique des sciences, Préface de Marie-Claude L'Homme*.** Paris: L'Harmattan. ISBN: 978 2 343 11731 7, 265 pages.

This latest publication on terminology as a vector of scientific thought is a book with a thesis to defend. The thesis stems from the conviction that language is deeply involved in scientific thought processes, meaning that the study of the language of science will throw light onto how science itself is conceived and transmitted. Understanding the language of science is therefore of foremost importance, not only in the form of terminology and how terminology comes into being, but also more generally in how sciences use collocations and phraseology in general to further its agenda. As the title suggests, we have here a study taken from a cognitive or conceptual basis, but one which, at the same time, studies the language of science from its form, typically from the viewpoint of the specialized translator – confirmed or in training.

The book is made up of four main chapters. The first questions what linguistics can bring to understanding science and scientific achievement; the second examines the role played by the term, especially the new term and term variation; the third is the quest for knowledge through language, including the definition, extraction from corpora and the construction of conceptual graphs or tree diagrams, to finish off in the fourth and final chapter, which examines how terminological instability actually plays a role in the process of scientific innovation.

This review will first outline the content of these four chapters and then focus on selected specific points raised.

The first chapter outlines how many sciences, including linguistics, aim to account for the acquisition of knowledge. It then goes on to broadly situate the study of LSP by examining the way linguists approach the question of how language embodies knowledge and points to new horizons opened up by corpus linguistics, giving the linguist access to vast quantities of discourse. The chapter ends with two investigations into how to construct (or reconstruct for the language engineer) knowledge through language, illustrated by the way linguistics elaborates its own science, illustrated by references to cognitive linguistics. Running through this chapter is a plea for applied linguistics – i.e. using linguistics to solve communication problems – in the most noble sense of the term.

From the second chapter on, one of the main themes of this book is developed: how instability and variation in terms actually involves creating meaning, including new meaning and innovation. Lexical dynamism, it is argued, goes hand in hand with cognitive dynamism. This means studying neology and its LSP variant, sometimes known as neonymy. The changing patterns of how term paradigms are formed are brought into perspective here, corresponding to changes in the way science is performed. The theme of instability is scrutinized: how instability in form and/or in meaning goes towards presenting different viewpoints and is thus fully justified. The chapter includes an in-depth analysis of markers which reveal the presence of neology and lexicalisation. Since language and science are so intimately linked, the author questions some of the outcomes of the ascendancy of English as the sole scientific language and wonders whether limiting the linguistic matrix of scientific thought to a single tongue will not inhibit the very variety that is part of scientific ecology.

The third chapter is about how knowledge takes form and is transmitted through language, and focuses first on the definition, traditionally a central point of terminology studies. True to her stance on variation, the author shows how there is not simply one definition for each particular concept, but indeed many possible definitions, depending on the point of view

adopted. She goes on to explain how definitions can be extracted from corpora in the form of definitional contexts and more generally through knowledge-rich contexts. This leads us in two different though complementary directions. One is the mini definition which, through exchange, becomes a newly-fledged term. The other is the construction of term bases, which have the natural ambition to become terminological knowledge bases.

The fourth chapter brings together the threads pulled out in the preceding sections and shows how the linguistic mechanisms used in constructing knowledge and creating new paradigms can be identified and accounted for. The way in which collocation generates meaning in scientific contexts is particularly well brought out here.

There are many points raised in this book which invite discussion, and those selected for presentation here are just a few. One of the main themes which is present throughout the study is that of neology, a topic, which, at least in French-language terminology work, has been given more lip service than serious treatment. It is approached here from several angles, including that of what the author calls *metaterms*, which are even more complex, and probably more recent, than the previously studied *heavy terms*. True to the cognitive approach adopted here, it is shown how these new term patterns which are emerging correspond to innovations in scientific thought. The demonstration of how term patterns evolve over time is also indicative of another welcome dimension of this work, the willingness to embrace a diachronic as well as a synchronic approach to terminology.

Although Pecman is an ardent advocate of wide-ranging textual analysis, and thus recommends a primarily semasiological approach, she by no means minimizes the role that onomasiology plays too, in particular in didactic situations:

Onomasiology is a bridge between words and objects, focusing on the phase where concepts are constructed, and thus very useful as an analytical tool to see how language works on the cognitive level, easing non-specialists into a specialized subject field. (p. 120, author's translation)

It should be pointed out that the author of this review is also a colleague of Mojca Pecman and thus more than conscious of the necessity to be completely objective in this reading of the book. It is indeed difficult to find fault with this innovative and persuasive study. One aspect which could have been more fully explored is the possible difference between the language of science and that of technology or techniques. Both fall within the scope of the book, but science rather than technology is the default mode. As far as technology is concerned, it could be argued that language (as well as other codes) is used not only to express knowledge, but also, and even primarily, to explain how to do things. One may suspect that the language involved will also be used differently, as is suggested in particular by Lerat (1995, 2016). This gap is also apparent in the treatment of terminology as used for technical writing, where a prescriptive approach may be necessary. This need for models is partly reflected in the way the ARTES (Aide à la Rédaction de Textes Scientifiques) term base was designed as a tool for writing scientific English, focusing on research papers, also exemplified by another of our author's resources, IMRAD. The ARTES tool caters in fact for both writing scientific English and for translating scientific texts with English and French as the main (but not exclusive) languages, but not for writing procedural texts. This is perfectly legitimate, as these aims may well not be compatible, but it underlines how much work remains to be done on LSP.

This is a rich book, which, like the subject matter dealt with, has several possible readings. One such is that of a treatise on the didactics of scientific translation. In spite of the existence

of such journals as the *Journal of Technical Translation* or JTT, there is relatively little available on the methodology of specialized translation. The many examples given in the book come almost exclusively from the work in translation and translation-oriented terminology from Mojca Pecman's own university, where she teaches at both undergraduate and Master's levels. The students with whom she is working are also in many cases apprentices in translation services in industry and thus grappling with the practical side of translation work. The richness of the analyses given throughout the book can be attributed to both the work of the students themselves but also to the input given by the faculty, including the author herself. One of the upshots of this innovative pedagogical work has been the creation of the term bank ARTES, which is also given as an example of what starts off as a linguistic analysis and ends up as a prototype terminological knowledge base. It is adaptable, since it incorporates a module to help non-native English speakers write scientific texts.

The book can also be read as an update on recent developments in LSP. It is extremely well documented in research carried out over the last twenty years in English and French. It is completely up-to-date, many references from 2018!

But reviewers tend to project onto authors the book that they themselves would have liked to have written, so to avoid this pitfall, it should be stated that Mojca Pecman succeeds in this book in explaining how linguists can participate in knowledge engineering, and at the same time, play a useful role in translator training.

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### References

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