Corpus-Informed Research and Learning in ESP. Issues and applications

Alex Boulton, Shirley Carter-Thomas, Elizabeth Rowley-Jolivet (eds).
Amsterdam: John Benjamins, 2012. 306 pages. ISBN: 978-90-272-0357-1.

In the second decade of the 21st century, Corpus Linguistics reaches out to otherwise traditional areas in language analysis such as diachronic linguistics, sociolinguistic variation and, indeed, ESP. Looking at the volume edited by ALEX BOUTON, SHIRLEY CARTER-THOMAS and ELIZABETH ROWLEY-JOLIVET, Sinclair's (1991) seminal work remains a theoretical reference of primary significance. Thanks to pioneers such as, among others, Sinclair and Tognini-Bonelli, general editor of this series, the use of corpora in language research and applied linguistics no longer needs defence; it requires method, proficient research skills and insight.

Corpus-Informed Research and Learning in ESP. Issues and applications is volume 52 of John Benjamins' Studies in Corpus Linguistics and has been "designed to tackle the problems faced by a variety of first- and second-language ESP users (specialised translators, undergraduates, junior and experienced researchers, and language trainers)" (see John Benjamins' website at URL: http://benjamins.com/#catalog/books/scl.52/main). The core of the volume is a collection of corpus-based studies of ESP in different domains written by a variety of researchers, mostly form the French-speaking academia.

SHIRLEY CARTER-THOMAS and ANGELA CHAMBERS explore the use of first person pronouns, and therefore the notion of authorial positioning, in Economics research article (RA) introductions in English and French. They use a corpus of 100 RAs, 50 in English and 50 in French from the KIAP corpus, University of Bergen, very similar in terms of size, ca. 300,000 words each. The authors present a rigorous combination of qualitative and quantitative methods that starts by examining the genre conventions of RA introductions in Economics, and then moves on to exploit the quantitative potential of their corpus.

ANTHONY SABER investigates phraseological patterns in a corpus of medical case reports and original biomedical RAs (375 articles, ca. 1.2M words) by, first, identifying frequent word clusters across the different sections of the RAs, and then relating them to rhetorical moves within their IMRAD structure. The author reports that specific phraseological patterns involving nouns and verbs were specific to each of the sections of the RAs, more noticeably in the "Method" sub-corpus, where section-specific salient words, as termed by the author, were twice or three times more frequent than in the rest of the sections of RAs in the LBC corpus.

FRANÇOIS MANIEZ uses a bilingual aligned corpus composed of texts published by the European Medicines Agency consisting of approximately 12,000 pair of sentences, together with the more general purpose CoCA, the Corpus of Contemporary American English, in order to study the use of adjectival modifiers, and in particular denominal adjective/noun modification, in both medical English and French.

ELIZABETH ROWLEY-JOLIVET uses a corpus of English native speaker research presentations in the fields of Geology, Medicine and Physics so as to examine multimodal communication involving written slides and their corresponding oral realisations. One of the strengths of this paper is a well-founded methodological account for the identification of linguistic functions with corresponding linguist features.

CÉLINE POUDAT and PETER FOLLETE's chapter draws a clear-cut distinction between domain (Biology vs. Linguistics) and genre (research vs. review articles) that is consistently based on data treatment at the lemma and the part of speech (POS) levels as well as at the lexical markers, stylistic markers and POS levels. Heirs to the Biber tradition in the late 1980's, the authors claim that quantitative methods such as factor analysis can reveal "key distinctions between experimental sciences and social sciences" (page 183).

DACIA DRESSEN-HAMMOUDA's paper explores "how scientific writers' disciplinary voice shifts over time as a result of increasing expertise" (page 193). The author examines the scientific production of five researchers in Geology over a ten-year period, using a control corpus of 65 RAs in the same field in order to obtain a representation of what is "central" in this particular register. Two aspects are of enormous interest in this paper: one is how the author builds the construct of "genre norm" by singling out 13 variables that can be identified and computed in the corpora; the second is

the use of standard deviation as a means to identify deviant linguistic behaviour of each of the researchers under scrutiny.

SUSAN BIRCH-BÉCAAS and RAY COOKE report the creation of "Type Your Own Script" (TYOS), a tool whose objective is "to highlight rhetorical strategies and linguistic choices within a corpus of scientific writing" (page 242). Using a small corpus of RAs, abstracts, case reports and other registers, the authors maintain that by demonstrating writing errors previously annotated on the corpus, researchers can have access to pedagogical input for learning. Unfortunately, they do not present an evaluation of how this methodology actually works with novel or junior researchers.

The volume includes other contributions that deal with a wide spectrum of corpus-related research areas: GEOFFREY WILLIAMS, for example, explores the usefulness of collocational networks to extract headwords and thus increase the potential of dictionaries to represent the language of science. NATALIE KÜBLER and ALEXANDRA VOLANSCHI, in turn, make use of both general and specialised English and French corpora to "provide potential applications in specialised translations and specialised translation teaching" (page 107) by exploring uses of verbs in general and specialised languages – Earth Science in this case. Finally, ALEX BOULTON discusses the contribution of 20 studies that have performed "empirical evaluations of corpus exploitation by second or foreign language users within the context of ESP" (page 261).

This volume is an excellent illustration of how the dichotomy between the register and the genre traditions outlined by Biber and Conrad (2009) can be resolved. While most of the papers in this collection present a combined research approach that takes into account qualitative as well as quantitative methods, there is a shared motivation to include corpus-driven, attested uses of language and innovative tools that, combined with quantitative methods such as keyword analysis or applications of standard deviation, can be instrumental in the description of specialized languages and their applications in language teaching. Thus, in this volume the reader will find references to both well-established software (Antconc) or cutting-edge applications such as the suite described by POUDAT and FOLLETE, and to corpora that can shed further light into some of the domains represented in the volume, in particular Economics, Medicine, Biology and Geology. The volume is prefaced by JOHN SWALES and the tables, figures and appendixes are extremely useful and easy to use.

The register that attracts most of the attention in this volume is the RA, a consequence of previous descriptions and applications that had already been discussed, for example, in another volume in the same John Benjamins series (Bhatia, Sánchez Hernández & Pérez-Paredes, 2011). Lastly, in most of the papers dealing with linguistic descriptions, there is an atomistic view of the language focus that BOULTON himself discusses in his contribution. On the whole, the volume exemplifies relevant research dichotomies in ESP – that is, micro vs. macro levels of analysis – as well as move structure vs. lexico-grammar levels (Flowerdew, 2011). Some of the papers in the volume are successful in integrating these tensions into a well-articulated compendium of best research practices in the field of ESP and specialized languages. It is precisely researchers in ESP those who will benefit the most from this significant contribution to the field of Corpus Linguistics.

Reviewed by **Pascual Pérez-Paredes**
Universidad de Murcia, Campus Mare Nostrum (Spain)
pascualf@um.es

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