

Tony Berber Sardinha and **Marcia Veirano Pinto** (eds.). *Multi-Dimensional analysis, 25 years on – a tribute to Douglas Biber* (Studies in Corpus Linguistics 60). Amsterdam: John Benjamins. 2014. 328 pp. ISBN 9789027203687. Reviewed by **Marco Schilk**, University of Hildesheim.

This book presents a collection of papers situated in the framework of Multi-Dimensional Analysis (MDA), a methodology first proposed by Douglas Biber in his seminal work *Variation across speech and writing* (Biber 1988) in celebration of the 25th anniversary of its publication (cf. p. xv).

After a short foreword by **Randi Reppen**, the editors provide an overview of the contributions included in the book. **Berber Sardinha** and **Veirano Pinto** place special emphasis on describing MDA as a methodology that, albeit appearing to be a highly formalized laboratory procedure, is ultimately dealing with “human communication, thoughtful consideration of the context and the people living in those situations where the language is used” (p. xv). It does not come as a surprise, therefore, that the focus on different speech communities and cultural settings is present in various papers.

This introduction is followed by an opening chapter by Biber himself, in which he offers an autobiographical account of the origins of MDA that lead to the 1988 publication and the development of the methodology over the two following decades.

The collection of papers included in this volume is structured in four different parts. Part 1 contains three different synchronic analyses using the MDA framework, while Part 2 focuses on diachronic variation in different registers. Part 3 widens the perspective towards the analysis of learner data, while Part 4 includes two chapters on the methodology itself and possible extensions thereof.

Part I, *Multi-Dimensional Analysis and synchronic analyses*, starts with a paper by **Grieve** on regional variation in American English. Based on a corpus of letters to the editor from 206 cities across the United States, Grieve performs an MDA, isolating three main factors that together account for 71 per cent of the variance in the values of the 46 variables under scrutiny. Results indicate that there are clear regional differences in the styles the three factors represent (Fac-

tor 1: simple vs. elaborated, Factor 2: narrative vs. expository, Factor 3: opinionated vs. informational), where an elaborated style is associated with the Eastern United States, an expository style is preferred in the coastal areas and an informational style is preferred in the northern part of the US.

Berber Sardinha, Kauffmann and Mayer Acunzo use a classic MDA to account for variation in different registers of Brazilian Portuguese. Based on 5,6 million words organized in 48 spoken and written registers, they account for variation within six different dimensions: oral vs. literal discourse, argumentation, involved vs. informational production, directive discourse, future vs. past time orientation and reported discourse. By focusing on Brazilian Portuguese they can, thus, point out similarities between and differences from previous studies based on different languages.

In the third chapter of Part 1, **Berber Sardinha** adds to earlier descriptions of register variation in English by focusing on newly emerged internet registers (blogs, webpages, facebook messages, twitter messages and email). These registers are compared to the registers described in Biber (1988) across the five main dimensions isolated there (involved vs. informational production, narrative vs. non-narrative concerns, explicit vs. situation dependent reference, overt expression of persuasion and abstract vs. non-abstract information). Berber Sardinha illustrates, *inter alia*, how facebook, twitter, and email messages are more closely associated with conceptually spoken traditional registers, while webpages and blogs are more closely associated with written registers.

Part 2, *Multi-Dimensional Analysis and diachronic analyses*, describes diachronic variation within three specific registers. In the first chapter **Veirano Pinto** analyses “variation in the verbal language of 640 North American movies released between 1930 and 2010” (p. 110). These movies are sorted and annotated according to a number of extralinguistic and situational variables, such as *decade, genre, public and critic ratings, movie length, nature of the script, directors* and *movie studios*. After carrying out a factor analysis of the tagged language data, she shows that seven factors account for 41.4 per cent of the variance in the data and illustrates how the variable-categories score in each of the underlying dimensions. Apart from using MDA for diachronic data, Veirano Pinto illustrates how the methodology can also add to interdisciplinary analyses of media by adding a cinematic point of view to the linguistic description.

The second chapter in Part 2 by **Bértoli-Dutra** also focuses on a specific register, namely pop songs from a variety of different genres, covering a time span from the 1940s to the 2000s. Bértoli-Dutra’s 1.15 million word corpus of pop songs is organized according to the decade of recording, music style and individual artists. The author identifies six dimensions of variation on two lev-

els: three lexico-grammatical dimensions (*persuasion, interaction and narrative concerns*) and three semantic dimensions (*personal action, emotion and society and musical reference*). She can, thus, show how MDA can be fruitfully extended to semantic analysis, noting that “[u]nlike most other MD studies, in this research semantic features were taken into account, revealing the most frequent themes in song lyrics and how they co-occur with each other” (p. 171).

Condi de Souza’s analysis of diachronic variation within the *TIME* magazine concludes the diachronic part of the book. The paper consists of two different approaches by (a) comparing the *TIME* data to Biber’s (1988) original dimensions, and (b) accounting for diachronic variation and identifying register specific factors of variation within the data itself. Condi de Souza can show how diachronic register variation is mainly accounted for in Dimension 1 (*involved vs. informational production*) where “the degree of information density has decreased over time” (p. 184), albeit never crossing the line “onto the involved end of the scale” (p. 184). By isolating factors of variation specific for the *TIME* magazine, she can also illustrate how external variables such as redesigns of the magazine or the change of editors influence the development of the register represented by the magazine.

Part 3, *Multi-Dimensional Analysis and language learning*, consists of two articles that add a focus on different types of learner language to the collection. **Crossley, Allen and McNamara** use a corpus of L1 argumentative essays to show how essay quality correlates with the dimensions identified by a principal component analysis based on the Coh-Metrix annotated corpus. Among other things they show that two factors are mainly associated with essay quality. The first factor shows that “high-quality essays are longer, more descriptive (i.e. more adjectives than adverbs), more lexically sophisticated and contain more clausal subordination, clausal embeddings, nominalizations, gerunds, longer phrases, connectives and rhetorical elements” (p. 227). At the same time it became also apparent “that there is likely more than one profile of a high-quality essay”, as in the second factor essays grouped together as “high quality were less lexically sophisticated [...], less syntactically complex [...] and contained less cohesion” (p. 227).

The chapter by **Asención-Delaney** is the second chapter in this volume that deals with a language other than English. Based on a 1-million-word corpus of L2 advanced academic writing consisting of 219 texts from 14 different genres written by graduate students, she uses a principal component analysis to identify six dimensions of variation that together account for 56.77 per cent of the variance within the corpus (*expository prose, reporting past events, defining/ explaining, hypothesizing about instructional practises, speculating about past*

actions, and expressing causal relations in instructional settings). These dimensions show that, while academic student writing is mainly expository in nature, the micro-focus of different genres within a specific linguistic discipline revealed a relatively “heterogeneous repertoire of linguistic features” (p. 261).

The final part of the book under review, *Multi-Dimensional Analysis: exploring the methodology*, consists of two papers that describe the basics of MDA (Friginal and Hardy) and add to the methodology of classic MDA (Conrad). Conrad “explores the potential for integrating Multi-Dimensional (MD) analysis into mixed methods research so that MD analyses can address more specific educational problems” (p. 273). Based on a corpus of civil engineering writing, she uses an MDA approach combined with qualitative text analysis to illustrate how student writing in civil engineering differs from expert writing in the field. By adding a qualitative analysis, Conrad shows how an MDA approach can go beyond a mere isolation of linguistic features of variation towards the identification of learners’ problems with mastering expert-level writing in a specific field, thus adding an applied linguistic perspective that is relatively rare in MDA studies.

The last chapter in the book by **Friginal** and **Hardy** provides the reader with a step-by-step guide to creating MDA with the use of the statistics package SPSS. This tutorial covers the basic steps for performing MDA on different types of texts. Starting with the preparation of data and a short discussion of different tagging possibilities, this tutorial guides the reader through analysing different factors, deciding on the ideal number of factors, creating a factor matrix and interpreting the different factors as dimensions of variation. This matrix can then be used to compute dimension scores for individual texts to compare different registers according to the identified dimensions.

Evaluation

As indicated in the title, this book celebrates the 25th anniversary of the publication of Biber’s initial work on register variation based on MDA (Biber 1988). A festschrift character is evident in the selection of the papers that provide a wide-ranging overview of different applications of this methodology.

I am in two minds about this book. While the individual chapters of this book all contain high-quality original research and should be of immense interest to any scholar interested in their individual research questions, the *25 years on* part of the title evoked expectations on my part that the book did not fulfil. Many of the papers included are relatively conservative in applying the methodology to their individual set of data without adding to it methodologically (note-

worthy exceptions are the chapters by Crossley, Allen and McNamara, as well as Conrad).

While the different parts of the book aptly illustrate how MDA can be fruitfully applied to synchronic, diachronic and regional variation and may also prove a useful tool for more applied tasks (such as identifying deviations of learner writing from expert writing), I would have wished for a stronger focus on the methodology per se. Although the final part of the book does include two chapters on MDA as such, adding a qualitative focus (Conrad) and providing an SPSS tutorial for conducting new MDA is somewhat less than I would have expected, considering the fact that the cover blurb describes the Multi-Dimensional approach as one of the most controversial methods in corpus linguistics.

The second point of criticism that I would like to raise concerns the structure of the book. To many readers it may have proven fruitful to move the final chapter towards the beginning of the book. As all of the chapters within the volume presuppose a familiarity with the methodology and Biber's original dimensions of variation, readers who are not part of the 'Multi-Dimensional community' would profit from the introduction to MDA that Friginal and Hardy offer before reading the other chapters.

In summary, by focusing on the individual chapters, this book will add a number of new perspectives to fields that have so far been less influenced by MDA approaches, as for example applied linguistics and language teaching. If seen as a *festschrift* that showcases the manifold applications of a methodology that has revolutionized the field of corpus linguistics, the volume in total is a very valuable addition to the *Studies in Corpus Linguistics* series and will be of great interest to the vast majority of the readers of the *ICAME Journal*, the above criticisms notwithstanding.

References

- Biber, Douglas. 1988. *Variation across speech and writing*. Cambridge: Cambridge University Press.