Grammatical complexity in academic English. Douglas Biber and Bethany Gray.. 2016. Cambridge: Cambridge University Press, 1+276.

Reviewed by PETER CROSTHWAITE[*]

This latest collaborative work from Douglas Biber and Bethany Gray expands on the already vast contribution to quantitative, corpus-based research that these authors are famous for, with the emphasis in this work, as with others, on challenging preconceived, stereotypical assumptions of discourse via the presentation of detailed, cutting-edge statistical analysis. In this volume, Biber and Gray tackle grammatical complexity and linguistic change in academic discourse, seeking to address three main concerns; namely that humanities writing is elaborated while science writing is structurally compressed, that academic prose strives for maximal explicitness of meaning, and that rather than a conservative, 'classic' register, scientific academic writing has undergone significant changes in grammatical structure over a 200 year period, unlike writing in the humanities, which has changed very little.

Ch. 1 (1-39) outlines (then masterfully debunks) some of the stereotypical assumptions about academic discourse as a deliberately complex and obtuse register. Beginning with amusing excerpts of *academese* to set the tone, Biber and Gray explain that dependent clauses – the common measure of grammatical complexity in the literature – are not entirely representative of academic writing. Rather, complexity in academic writing lies in embedded phrases, compressing rather than elaborating information and resulting in less explicitness, not more. The authors then outline

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how academic writing has, contrary to popular belief, gradually incorporated a number of linguistic changes typically attributed to the spoken register.

Ch. 2 (43-66) presents an outline of the corpus methodology adopted in the volume. Fortunately, the authors are careful to explain the tenets of comparative corpus linguistics in a manner where newcomers to the field may find comfort, before detailing the construction of the corpora used in the present volume.

Chapters 3 (67-124) and 4 (125-166) present the quantitative findings of the study, with ch. 3 looking at synchronic register variation, while ch. 4 looks at diachronic variation. The focus of ch. 3 is to compare the academic written register with that of conversation, textbooks, newspapers among others, as well as looking at variation within the academic written register itself. The authors contend that academic writing, particularly scientific academic writing, is unique among the other registers analyzed. Ch. 4 continues this inter-register comparison, looking at development over the past 300 years. The authors propose that academic writing has exhibited significant diachronic change in the use of phrasal complexity features, and that – once again - change in the scientific writing genre is responsible for much of the variation.

Chapters 5 (167-217) and 6 (218-243) look at historical developments in phrasal complexity and explicitness respectively. More functional in nature than the analyses seen in previous chapters, Ch. 5 discusses the extension of phrasal grammatical features in academic writing. The authors contend that the changes noted in chapters 3 and 4 are not representative of stylistic trends, but are indicative of the extension of grammatical and discourse function of the linguistic devices in question, namely phrasal devices functioning as nominal pre- and post-modifiers indicative of a 'drive towards economy of expression' (207). Ch. 6 (218-243)charts the 'loss' of explicitness in academic writing over time as the result of the compression of grammatical

structures at the phrasal level. Biber and Gray claim that we are now seeing structures that are maximally *inexplicit* rather than explicit in meaning. Complexity is now to be recognized in terms of this inexplicitness. The authors use examples such as '*punishment training*' and '*sign function*' (225) to show that it is in the phrase, rather than the clause, where assumptions of technicality in academic writing lie.

Ch. 7 (244-256) presents the summary and implications for the analyses provided in chapters 3-6. The first point to make from the findings is that the stereotypes regarding grammatical complexity in academic writing now lack validity. The second main point is that speech should no longer be considered as the sole historical locus of grammatical change, and that changes to the functional, situational contexts are representative of the changes seen in both spoken *and* written registers. The authors finish the volume with a number of recommendations for the teaching of academic writing and reading, focusing on a sequence of proposed developmental stages for complexity features.

Overall, the value and importance of Biber and Gray's contribution to the understanding – and reinterpretation – of the academic written register through the findings of this volume is immense. In one fell swoop, years of stereotypical assumptions about academic writing have been overturned, which should come as some relief to the great many first and second language users of this register. While the quantitative detail involved in such an endeavor is immense, the apparent simplicity with which the stereotypes have not only been challenged, but *destroyed*, is a serious wake-up call for linguists. This also means that the kind of conservative, prescriptive guides on academic writing may now (thankfully!) be consigned to the shelf to collect dust. Methodologically, the work continues in the tradition that the authors are known for – the use of cutting-edge corpus-driven statistical measures of linguistic features within carefully

constructed and comparative language corpora. One of the crucial elements in a work with a heavy focus on quantitative analysis and syntax (and, perhaps ironically, a work with a heavy focus on complexity) is that of accessibility, particularly for those who are unused to the linguistics of syntax and their accompanying statistical trends. In this regard, the work is highly successful. Many of the linguistic terms, for example, appositive noun phrases, dependent clauses and so forth are glossed for the reader; a wealth of qualitative examples with clear marking of key elements are provided alongside the detailed quantitative charts and tables. This is a welcome development in what can be a very complex field of linguistics. The exhaustive list of linguistic features and subcorpora involved in the study is typical of the authors' general detailed and principled approach, with enough information provided to ensure interested researchers are able to replicate the findings of the study, at least as long as they are able to access the tools developed by Biber and his colleagues.

The implications for teaching and learning that result from the volume are numerous and high-impact. As an occasional teacher of graduate thesis composition courses myself, the findings presented in this volume essentially mean we may have to throw out the existing rulebook on academic writing materials and seriously rethink the way we position the academic register in relation to that of other registers. Another major implication is that of the central position of phrasal complexity in the overall complexity of academic discourse, and the level of background discipline-specific knowledge required by novice writers and readers to navigate such phraseology. Interestingly, this is where another central function of language corpora may prove most useful – that of the analysis of collocation in the form of data-driven learning (Johns 1994). If the key determinant of complexity within and between science and humanities writing is now phrasal in

nature, then the potential usefulness of discipline-specific corpora and the training of novice writers in utilizing such corpora for language learning cannot be underestimated.

In summary, this volume represents some of the very best in corpus linguistics, and from one corpus linguist to another, I realize that I may still have a long way to go before I can match what Biber and Gray have managed to achieve in this volume. That said, in the authors' words, the volume acts a starting point for future research from a range of perspectives, and we should all be grateful for the opportunity.

REFERENCES

Johns, Tim. (1994). From printout to handout: Grammar and vocabulary teaching in the context of

data-driven learning. In Terance Odlin (ed.), *Perspectives on pedagogical grammar*, 293–

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