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## Book review

## Scientific Discourse and the Rhetoric of Globalization. The Impact of Language and Culture, C. Pérez-Llantada. Continuum, London and New York (2012). p. 256, USS 34.54/UK $\pm$ 24.99 (Paperback), ISBN: 978-1-4411-8872-4, USS 140/UK $\pm$ 75 (Hardcover), ISBN: 978-1-4411-5983-0

This book sets out to make the reader fully acquainted with the new landscape in science and scientific discourse resulting from the era of globalisation. It widens the scope of previous research in this field: the author aims to deal not only with the so-called "hard sciences" but also with social sciences and the humanities. It has been written for the native English-speaking researcher specialised in any of the above-mentioned disciplines, as well as the plurilingual scholar who is competent in languages other than his/her mother tongue. Adopting a discourse, rhetorical and genre orientation, this book develops the author's claim that an understanding of scientific discourse is essential for the production, dissemination and reception of scientific knowledge, for both native English-speaking and plurilingual scholars. The methodological approaches adopted by the author take into consideration some of the most updated developments in the field, such as corpus and text linguistics and ethnographic perspectives. The author stresses that social and interpersonal aspects underlie the discourse of science and shows the ways in which academic genres are constantly evolving in their rhetorical conventions. This is a result of the interchange of knowledge among scientists and scholars, regardless of whether English is their mother tongue or not.

The book is structured into eight chapters. Chapter 1, entitled "The Role of Science Rhetoric in the Global Village", provides an overall view of the study, addresses the existing theoretical and methodological approaches and defines the major target reader of the study.

Chapter 2, "Scientific English in the Postmodern Age", approaches scientific discourses within contemporary postmodernism from a twofold perspective, both as a textual process and as a textual product. In the context of a bibliometric analysis, the author deals with the situation of scientific research, publications and scientific quality in different contexts, and also with the overwhelming relationship between Universities and research – mainly, in the United States, the European Research Area (ERA), and Asian Universities (e.g., those of Japan and of China). This overall context enhances the transnational and international dimensions of knowledge nowadays and also helps Pérez-Llantada describe and characterise the Spanish situation. Emphasis is placed on the intrinsic and close relationship between research, education and economic development, which is based on the fact that knowledge must be assumed to be accountable, transferable and applicable. Similarly, the book shows how publishing in the English language has practically become indispensable for research to achieve a notorious international impact. In this sense, it is underlined that writing in English by non-native speakers requires not only a command of the grammatical and lexical aspects of the language, but also an acquaintance with the underlying academic rhetorical system.

Chapter 3 approaches scientific texts from the textual and discourse perspective of genres. It addresses the latest tendencies in the rhetoric of contemporary science, where, according to Pérez-Llantada, the scientific text has become a commodity which 'seeks to sell science'. With such a purpose in mind, the author dwells upon the standardisation practices in scientific discourse within the social context. This is followed by the study of the socio-cognitive aspects of the rhetoric of science. The chapter also provides the reader with a comprehensive analysis of the most outstanding characteristics of contemporary scientific discourse, especially focussing on its textual aspects. Finally, the scientific text is analysed in its twofold but unified perspective as both a process and a product.

Pérez-Llantada convincingly demonstrates that the scientific text is far from being purely informative or objective. Rather, she shows how the text reflects interpersonal and persuasive aspects which are inherent to the dissemination of the research made among the scientific community, particularly in relation to claims and results. The author argues that this has resulted from the essentially dialogic nature of scientific discourse. Thus, Chapter 4 deals with a contrastive-rhetoric approach to science dissemination on the basis of the tools supplied by corpus analysis and linguistics. More specifically, it approaches the task of writing a research paper in Anglophone contexts on the one hand and in non-Anglophone contexts on the other. It aims to raise the reader's awareness of the existing heterogeneity, diversity, and variation that may be expected in the two contexts regarding such aspects as linguistics, discourse analysis and rhetorical practices. The similarities and differences that can be traced in the English texts produced by either native or non-native speakers of English are explored. This is done through authentic data provided by corpora, namely the SERAC 1.0 (Spanish English Research Article Corpus), compiled by the

InterLAE research group at the University of Zaragoza in Spain. The corpus is intended to study expressions of assessment used by authors in texts of several scientific areas across different cultural contexts. The chapter focuses upon the multi-faceted aspects of transfer from L1 (Spanish) to L2 (English). This analysis allows the author to bring to the surface the recurrent academic practices that have become standardised in English, as well as the richness and hybridising factors that may be contributed by the different 'academic Englishes' (Mauranen, Pérez-Llantada, & Swales, 2010) existing worldwide.

In Chapter 5, the author approaches scientific dissemination from an ethnographic perspective. The aim is to contrastively analyse the written practices in English as a language used for scientific communication, by both native English-speaking investigators on the one hand, and Spanish researchers, for whom English is their L2 in scientific and specialised communication on the other. The methodological approach undertaken by the author relies upon interview-based protocols. This method is complemented with ethnographic and textual or textographic contributions (Swales, 1998). The main difficulties faced by either native or non-native speakers of English and the suggested ways to deal with them when writing different parts of a research article will be particularly useful for researchers from diverse linguistic backgrounds.

In Chapter 6, the quantitative and qualitative evidence supplied in the two previous chapters has led the author to consider a firmly grounded discussion on the relationship underlying the key aspects of the English language, scientific research and production in the era of globalisation. As enunciated in the title of the chapter, the author triangulates procedures, practices and texts, as intersecting scenarios for the elaboration and the diffusion of scientific research. The rhetoric of science is reexamined, bearing in mind the different styles that native and non-native speakers may have, and aspects such as hybridisation resulting from such a situation, or the acceptability of the latter within the overall and hegemonic tendencies. Other themes of crucial importance within the international panorama of science, such as 'gate-keeping', are accurately and appropriately tackled by Pérez-Llantada. Finally, adopting an interpersonal and social standpoint, the chapter discusses the roles of situated learning and of advanced literacy skills.

Chapter 7 approaches English as a Lingua Franca (ELF) from a sociolinguistic point of view and addresses the question of whether English will continue to be the universal lingua franca for research. The role of other varieties of academic Englishes and of other major academic languages is also discussed in this chapter. The author advocates for the sensible proposal to both accept peripheral variations and, perhaps more importantly, to act on each specific educational micro-context so that the particular needs of researchers are catered for in a sort of glocalisation process (e.g. Pérez-Llantada & Ferguson, 2006). It is sensibly proposed by the author that scientific English is a standard variety on its own, a functional variety of English, which she terms standardised scientific English.

Finally, Chapter 8 sets out to redefine the rhetoric of science within the wider and multidisciplinary approach which has sought to embrace the whole of the scientific disciplines and branches of knowledge in an increasingly global world, in which ICTs have assumed a leading role. Following Swales (2004), Pérez-Llantada claims that these new technologies have brought forward a speech/writing continuum, and consequently, genres are no longer seen as individual items but rather as "forming complex networks of various kinds" (p. 195).

The book will meet the needs of a potentially broad readership, as it will be of interest both to researchers across different disciplines and to linguists and translators who use English in their everyday academic communication, regardless of whether they speak English as their L1 or L2. *Scientific Discourse and the Rhetoric of Globalization* offers the reader a most updated perspective on research in English, or, as the author notes, in English as a lingua franca (ELF). Her work also shows valuable and fruitful ways in which scholars from different national backgrounds can learn from one another.

In sum, this work will certainly become an indispensable tool to understand the way in which rhetorical and discourse practices have recently evolved in scientific and technical discourse. It will be of interest to all users of scientific and technical English, in so far as it has become the major lingua franca of academia, and both practitioners of the soft and hard sciences will find interesting suggestions for their academic practice. At the same time, it will provide guidance to all those scholars in linguistics and rhetoric who are potential trainers of scientists that will need English to communicate and disseminate their research in every field of knowledge. The book will also provide food for thought for the manifold actors involved in academic and scientific discourse and the publication and dissemination of research findings. Readers will find guidance on discourse and rhetorical practices in scientific communication.

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