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Linguistic Insights  
Studies in Language and Communication

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# Linguistic and Translation Studies in Scientific Communication

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## Introduction

Over the past few years, the field of *English for Specific Purposes (ESP)* has become fairly consolidated. Within this broad term, further areas of interest have been traditionally distinguished: *English for Academic Purposes (EAP)*, *English for Business and Trade (EBT)*, *English for Science and Technology (EST)*, *English for Legal Purposes (ELP)* and *English for Vocational Purposes (EVP)*. This volume specifically deals with the *EST* branch which, as its name indicates, is concerned with the specific uses and functions of language in scientific and technological disciplines. Although language in science has traditionally been valued for prioritising objective and propositional content, interpersonal and pragmatic dimensions have lately been explored with many interesting results. In addition to the linguistic perspective, relevant contributions have also been made within the field of Translation Studies which facilitate the understanding of specialised communications.

Taking this into account, the volume *Linguistic and Translation Studies in Scientific Communication* aims to further contribute to the development of the *EST* field by offering insightful perspectives from linguistics and translation. More specifically, the papers in the book cover topics such as popularisation and transmission of scientific knowledge via the technologies of information and communication; terminology and corpus-based studies in scientific discourse; genres and discourse in scientific and technical communication; history and evolution of scientific language; and translation of scientific texts.

The book is divided into two sections, which mirror the two perspectives above-mentioned: the first part is entitled ‘Construction and Communication of Scientific Knowledge’; and the second one, ‘Translation and Scientific Knowledge’.

Section I opens with MARTIN HEWINGS’s chapter, where he explores the impact of the popular press on the image of science and

scientists as well as the differences in the way this image is projected to the general public. He analyses two science news articles published in the British tabloid *The Sun*, tracing their journalistic history back to the original research papers. By focusing on the language of science reporting in the press, Hewings sheds light on the complex interaction between specialist and popularised communication in today's society.

Chapter 2, by FRANÇOISE SALAGER-MEYER, offers a diachronic exploration of scientific discourse by studying the rhetorical evolution of criticism, which is essential to the very construction of scientific knowledge. The paper focuses on the genre of the academic book review (BR) and analyses a range of features closely related to the critical task in a corpus of medicine BRs in three distinct periods: the closing years of the 19<sup>th</sup> century, the mid 20<sup>th</sup> century and the beginning of the 21<sup>st</sup> century. Salager-Meyer emphasises that only by making reference to the history of science will we be capable of understanding the formal and rhetorical features of today's science.

In the next paper, LUZ GIL-SALOM and CARMEN SOLER-MONREAL explore the appraisal resources most frequently used in the discussion sections of research articles (RAs) in four engineering disciplines: Computing, Telecommunications, Nanotechnology and Robotics. The authors focus on evaluative, certainty and epistemic expressions, which most conspicuously reveal the writer's attitude and engagement towards propositions in the text and, more importantly, towards the reader.

Chapter 4, by CONCEPCIÓN ORNA-MONTESINOS, deals with the semantic relations of hyponymy (the 'kind of' relation) in the specialised discourse of architecture, construction and civil engineering. More specifically, the set of cognitive synonyms, hyponyms and meronyms provided by the lexical database of the WordNet project for the noun *building* is contrasted with the frequency analysis of its hyponyms in the *Construction Textbooks Corpus* (CTC). Results show how semantic relations condition the choices available to the members of this discourse community to lexicalise their disciplinary world.

NURIA EDO, in chapter 5, offers a selection of entries from the prospective specialised bilingual (English-Spanish, Spanish-English) dictionary of the ceramics industry she is currently working on. Within the framework of contrastive lexicography, the terminological units of

the ceramics industry field are shown in a useful and realistic manner, emphasising the communicative and associative nature of such units.

Chapter 6, by INÉS LAREO, presents the main guidelines of a long-term project carried out by the research group *Multidimensional Studies in English* at the University of A Coruña. This project, the *Coruña Corpus of Early Scientific Writing*, comprises several subsections of scientific areas in the Modern English period, especially Astronomy. The CETA (*Corpus of English Texts on Astronomy*) subcorpus is the object of study of this researcher and is also focused on in chapters 7 and 8.

In chapter 7, GONZALO CAMINA examines the processes of word formation in twenty samples of the Philosophy section of the *Coruña Corpus of Early Scientific Writing*, paying special attention to affixation. Camina is particularly interested in how science coined new nouns in the Early Modern English period.

This first section of the book finishes with ESTEFANÍA SÁNCHEZ BARREIRO's paper, in which she studies the occurrences of the so-called 'extenders' in a collection of scientific texts from the 18<sup>th</sup> century. The main interest of her study is to provide an overview regarding the use of this type of constructions in the formal context of scientific discourse, a fact which poses a challenge since extenders are more frequently found in informal and/or oral communication.

In Section II, TOMÁS CONDE's paper presents a study on serial translation evaluation, focusing on the differences in the behaviour of four groups of evaluators – potential addressees, professional translators, translation teachers and translation students – while appraising specialised and non-specialised texts. Conde concludes that there are two aspects that influence the differences observed: the evaluators' self-confidence about the subject matter, and the nature and disparate complexity of the technical and the non-specialised prose.

Chapter 10, by PILAR ORDÓÑEZ, provides a revision of the characteristics of specialised communication, placing particular emphasis on legal translation. Drawing on the concept of textual genre, the author describes each stage of the translating process as performed by a specialised legal translator, using the multilingual GENNT *Corpus of Specialised Genres*.

In chapter 11, FRANCISCA SUAU-JIMÉNEZ draws attention to the importance of metadiscourse in the translation of scientific texts. She

carries out a pilot study which analyses hedges and phatic elements, drawing on a corpus of RAs and popular science articles in English and Spanish. Suau-Jiménez concludes that the main differences between English and Spanish metadiscourse are cross-generic rather than intra-generic. Nevertheless, the need to undertake deeper and wider research in order to explore frequency of these features in both languages and genres is highlighted.

OLGA TORRES-HOSTENCH, JOSÉ RAMÓN BIAU, PILAR CID, ADRIÀ MARTIN, BARTOLOMÉ MESA-LAO, MARIANA OROZCO and PILAR SÁNCHEZ-GIJÓN describe the design and development of the *TRACE (Traducción Asistida, Calidad y Evaluación)* research project, which is currently investigating the impact of CAT (Computer-Assisted Translation) tools on target text production. Drawing on the hypothesis that the final texts obtained using CAT tools differ from those in which such tools have not been used, the research group carried out an experiment which involved professional translators working in a simulated real-world environment. The experiment established specific variables applied to the study of technical texts.

In chapter 13, JUAN JOSÉ MARTÍNEZ-SIERRA draws on the dramatic increase of scientific and technical texts in the media, especially documentaries on television. Documentaries are defined as an audiovisual genre (in contrast with written and oral genres) in which scientific and technical contents find their place, and which prioritise specific translation modalities, namely dubbing, voice-over and subtitling. Martínez-Sierra points out that audiovisual translation makes it possible for documentaries originally produced in another language to cross the language barrier and to be screened in Spain. Finally, some implications for translators are discussed.

The closing chapter of the volume, by MARÍA ROSARIO BAUTISTA ZAMBRANA, explores the topic of ontologies for scientific and technical translation in the medical field of diabetes. For this purpose, she resorts to the Termontography approach, and to the methodology for ontology creation, the so-called ‘Methontology’.

We hope the rich and interesting variety of approaches offered in *Linguistic and Translation Studies in Scientific Communication* will provide useful insights, and ultimately contribute to a better understanding of scientific communication today.