

ECHO

COLLANA DI TRADUTTOLOGIA  
E DISCIPLINE DELLA MEDIAZIONE LINGUISTICA

4

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# ECHO

## COLLANA DI TRADUTTOLOGIA E DISCIPLINE DELLA MEDIAZIONE LINGUISTICA



*Senza la traduzione abiteremmo province confinanti con il silenzio*  
(George Steiner)

La collana “Echo” prende il nome dalla ninfa oreade, che personificava l’omonimo fenomeno fisico, rievocando così il contatto tra voci, culture e tradizioni diverse e al contempo la ricezione, la ripetizione e la variazione. Nasce col proposito di accogliere al suo interno una serie di monografie e di studi riferiti agli ambiti della traduzione e della mediazione linguistica in senso più ampio.

Caratterizzata da un approccio accademico, la collana si presenta come un funzionale veicolo per la diffusione dei risultati delle ricerche condotte nell’esteso dominio della Teoria e della prassi della traduzione e delle discipline della Mediazione linguistica.

Nella collana si intendono affiancare ai risultati della ricerca anche dei testi che possano rappresentare degli strumenti utili alla didattica della traduzione e dell’interpretariato.

Internazionale per vocazione, “Echo” si propone di ospitare al suo interno testi in lingua italiana, inglese e francese, con l’auspicio di apportare un importante contributo all’attuale indagine internazionale inerente alle discipline in questione.

A garanzia della rilevanza scientifica, della significatività del tema trattato e dell’originalità delle opere pubblicate, la collana adotta un sistema di doppio referaggio anonimo (*double blind peer reviewing*).



Marina Manfredi

# Translating Science Journalism





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*To my husband, my father  
and in memory of my mother*



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## Introduction

Science pervades many aspects of modern life, and we are increasingly called upon to make decisions about issues that are impacted by scientific knowledge and technological expertise. Many current political controversies — from the debate over global warming and climate change to the dispute over embryonic stem cell and genetics research — are underpinned by scientific issues. As a major source of information about science and technology, most people rely on the mass media, ranging from the press to the radio, from television to the Web. In the landscape of the written media, along with an ever-increasing number of popular science magazines, both in print and online, most newspapers and consumer magazines include special sections devoted to science and technology; likewise, the Internet is rich in websites focusing on popular science and blogs.

While scientists and academics tend to use English as a global *lingua franca* to spread scientific knowledge, non-specialized readerships interested in science findings commonly depend on translation. Popular science *in and for* the mass media is thus an area of significant importance for research into linguistic aspects and translation. However, the field is as yet largely underexplored within translation studies (henceforth TS), with a few exceptions (Liao 2010, 2011, 2013; Olohan 2016), and therefore this book could make an important contribution.

Recently, there has been a growing interest in news translation (see, e.g., Conway and Bassnett 2006; Bielsa and Bassnett 2009), while the interlingual transfer of popular science has hitherto not received much attention, if not limitedly to select issues or to sparse contributions (see, e.g., on metaphor translation: Shuttleworth 2011, 2014, 2017; Merakchi and Rogers

2013; Manfredi 2014; on the influence of English on the German communicative style: Kranich *et al.* 2012).

Research into both the language of news media and of scientific writing has long been established, from a variety of perspectives, whereas there is little work available in the field of popular science. From the perspective of linguistics, most existing research examines popular science within the broader field of scientific discourse, and mainly offers contrastive studies between scientific texts and popularized ones (e.g. Myers 1990; Garcés-Conejos and Sánchez-Macarro 1998; Hyland 2010). As the communication scholar D. Nelkin (1987, p. x) argues, popular science shares features of both science and journalism and can thus also be viewed as “science journalism”. Nonetheless, even though it is widely acknowledged that popular science encompasses a wide range of discourses, its role as a journalistic practice has so far not received much attention in linguistics studies, apart from sparse contributions (MacDonald 2005; Hewings 2010). A view of popular science as science journalism is precisely the perspective endorsed in this book.

In the area of media studies, the role of written media in relation to the world of politics has been given priority (Conboy 2005, p. 4), while popular science writing has to date been relatively overlooked. This seems surprising, as some of the major political issues today are undeniably linked to science. From the point of view of mass media, even the significant impact of magazines on the marketplace and on the readership has been inadequately acknowledged.

This book seeks to offer, for the first time in a full-length book, an investigation into the major issues involving popular science writing in printed media, in both consumer and specialized magazines, with a specific focus on the feature article, when it undertakes a process of translation into another language.

The choice of focusing on print media rather than on other modes of popularization, such as audio-visual channels, the Internet or electronic devices, rests on different grounds. Apart from the merely practical reason that written material is imme-

diately available for text analysis (with respect to spoken media), therefore other researchers can also undertake their own investigations into the same texts, I believe that written forms are more “stable”<sup>1</sup> sources and thus can offer more valid and systematic results. Moreover, since translation is mainly viewed as a linguistic-cultural process, a deep linguistic text analysis is aimed at, hence the genres that are strongly influenced by different multimodal aspects have been excluded.

I am also fully aware that the wide dissemination of science knowledge is achieved through new media, including social media. Yet, while this area is extremely important for linguistics studies *tout court*, it seems to offer less room for research into translation, since it encompasses primarily monolingual texts.

This book is firmly rooted in TS, in particular within a linguistics framework. However, it also draws on other disciplines, such as media studies and science communication studies. This reflects the way that TS has evolved to interrelate with other disciplines. Furthermore, since we are dealing with a text-type firmly grounded on the professional domain of journalism, some notions from that area are, we believe, also vital for a more thorough understanding, together with a view from the professionals working within it.

The book focuses on popular science writing, not in the sense of intralingual simplification for the sake of non-expert readers, but of science-related writing addressed to nonspecialist audiences. An addresser, to varying degrees a specialist in the field, shares scientific discoveries or specialized issues with a non-specialist addressee. Both addresser and addressee can be highly diversified. Popular scientific texts are commonly written by scientists, science writers or “chameleon” journalists — and the crucial role played by sub-editors should not be underestimated. The typical consumers are educated, and interested, laypeople, but may also be specialists in other areas of exper-

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<sup>1</sup> For the concept of “stable” vs “unstable” sources (Hernández Guerrero 2009), see section 4.1.

tise. Translators of popular science in print media are usually professionals (and not journalists-translators as in the case of “hard news”) and are often “visible”.

Unlike news articles, aimed at informing the readers, popular science feature articles entail a double function: of informing the readers while offering them entertainment, with the ultimate goal of promoting (i.e. “selling”) science. In order to entertain the readers and catch their attention, popular science writers make use of a wide range of linguistic strategies. This is well represented in feature articles, which are the focus of this book.

Features are considered a specific genre (encompassing a range of sub-genres), in which the journalist/writer has some freedom to experiment with style and introduce his/her own voice. Indeed, although there is a widely held belief that science has to be purely objective, subjectivity often intrudes into the text. This book seeks to look into the linguistic strategies that the writer uses within this creative and subjective dimension, and in particular into what happens when all this undergoes a process of interlinguistic transfer into another language. What is the extent of the translator’s/editor’s intervention?

To explore this issue, *Translating Science Journalism* adopts a linguistics perspective, specifically that of Systemic Functional Linguistics (henceforth SFL), which is deemed particularly useful for examining, in a systematic way, the “meanings” conveyed in source and target texts. In order to investigate how reality is represented in texts, how interpersonal relationships between the interactants of the communicative event are constructed and how the textual resources of lexicogrammar are used to create a cohesive and coherent “text”, a Hallidayan model is employed (Halliday 1994)<sup>2</sup>.

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<sup>2</sup> Halliday M.A.K., *An Introduction to Functional Grammar*, Edward Arnold, London 1985 (revised 2<sup>nd</sup> edition 1994; revised 3<sup>rd</sup> edition, with C.M.I.M. Matthiessen, 2004). Unless otherwise specified, page references will be to the 4<sup>th</sup> edition: Halliday M.A.K., revised by Matthiessen C.M.I.M., *Halliday’s Introduction to Functional Grammar*, Routledge, London and New York 2014.

SFL has largely explored journalistic discourse<sup>3</sup>, although its major concern has been newspaper journalism and the language of the so-called “hard news”. Most research into popular science from an SFL perspective deals with either popularized science books (Fuller 1998) or science journals *vs* those of popular science (Minelli de Oliveira and Pagano 2006), while there has been less interest in popular science writing as science journalism.

In addition, with the aim of analysing how personal opinion and/or ideology are expressed in texts, this book adopts the perspective of Appraisal theory — a model for evaluation developed within the framework of Hallidayan linguistics (Martin and White 2005), which has only recently been employed in TS (see Munday 2012, 2015). While Appraisal theory has been amply exploited in linguistics studies on newspaper discourse from a monolingual (Bednarek 2006), or even plurilingual (Thomson and White 2008), perspective, it has more rarely been applied to journalistic translation (Zhang 2011; Manfredi *forthcoming* a, b), and at least to my knowledge, has not yet been applied to science journalism translation.

In order to show the analytical models in operation, a selection of pilot studies taken from a wider corpus is presented, to illustrate in detail how a linguistic analysis of a source text (henceforth ST) into a target text (henceforth TT) can offer fruitful insights into text interpretation. To test the validity of this linguistics approach, it will be applied to the analysis of four feature articles dealing with science and technology, published in «Scientific American», «New Scientist», «National Geographic» and «The New Yorker», and compared to the corresponding Italian translation that appeared in three specialized and consumer magazines, i.e. «Le Scienze», «National Geographic Italia» and «Internazionale». To narrow down the wide range of scientific fields, feature articles have been classified and sub-divided into the areas of the so-called “hard” sciences,

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<sup>3</sup> For an overview, see White (2012).

“soft” sciences, engineering and technology, medical and health sciences.

Conclusions on the validity of the model and on the broader insights it may suggest are drawn, and comments on future perspectives are given.

Although the main focus of this book is on print media (i.e. texts intended for print even if they are also available electronically), given the increasing impact of the Internet on the print industry around the world and the ever-growing role of blogs as a new form of journalism, some observations with respect to these issues are also offered.

The main goal is to present an analytical framework that can stimulate further research in the field of popular science writing that will study other language pairs, other texts and different contexts. In doing so, it aims to encourage cross-disciplinary perspectives within a TS framework, to the mutual benefit of the disciplines involved.

While primarily designed for researchers within TS and applied linguistics, *Translating Science Journalism* is also intended for anyone interested in journalism, media and communication studies. It is also hoped that this book may serve as a tool for professional translators working in the field of popular science writing, not only in Italy but also in an international context. No less importantly, it is hoped that the book can be employed in a didactic perspective in order to train translation students and practitioners dealing with this complex, yet fascinating, field.

### ***Book Structure***

*Translating Science Journalism* is divided into ten chapters.

Chapters I-IV set the foundations, by introducing the three main areas on which the book concentrates, i.e. Media, Science and Translation.

Chapter 1 (“Magazine Journalism”) serves to sketch out the background of the media industry and how it has evolved (both diachronically and synchronically), to illustrate contemporary journalistic practice and to introduce some key concepts.

Chapter 2 (“The Feature Article”) deals with the text-type which represents the major object of study in this book.

Chapter 3 (“Popular Science in the Media”) looks at the origins of science popularization, defines its main terms, discusses its most relevant issues and introduces some main features of the language of popular science writing, from the point of view of linguists and of professional science writers.

Chapter 4 (“Translating Popular Science”) after briefly revisiting the areas of journalism and science within TS, focuses on the translation of popular science discourse within the discipline of TS.

Chapters V-VI describe the theoretical framework and the analytical model employed in this study. Chapter 5 (“Theoretical Framework”), outlines Halliday’s SFL model and Appraisal Theory, while Chapter 6 (“Materials and Methods”), describes the material used for investigation, explains its classification, illustrates methods and goals.

Chapters VII-X apply the theoretical framework to concrete instances of popular science texts taken from the traditional areas of science, engineering and medicine. The chapters offer a detailed analysis of four pilot studies — in different fields, subject fields and sub-domains — consisting in the analysis of authentic English STs and their corresponding Italian versions, focusing on the shifts that occurred in the process of interlingual translation.

Conclusions propose some considerations in the light of analysis and offer further insights to be developed in future projects.



## Magazine Journalism

This chapter will start with an historical survey of print journalism — dealing especially with English-language print media, with a special focus on early magazines (1.1.). After briefly discussing similarities as well as the most striking differences between newspapers and magazines (1.2.), it will offer a brief illustration of the magazine industry (1.3), in its key sectors and roles, including an overview of online journalism.

Media scholars T. Holmes and L. Nice argue that «magazines are the most successful media format ever to have existed» (Holmes and Nice 2012, p. 1). They contend that this is a big claim when considering that television has apparently been dominant in the last fifty years, «but magazines are so ubiquitous and their consumption so engrained in habit that their importance almost ceases to register and is thus overlooked» (*ibidem*).

Indeed, magazines are an often-disregarded part of our daily life, even though they have an important role to play, for their social, cultural and intellectual value (*ibidem*). They bring pleasure to millions of readers, can influence their behaviour, consumption or aesthetics, and inform and educate them (Holmes 2008: viii).

Nevertheless, with respect to other mass media such as television, newspapers, cinema and radio, magazines have generally been underestimated by both the journalism industry and the academy (Holmes and Nice 2012, p. 1). Yet, as Holmes points out, «Magazines have a specific role to fulfil within the ecology of media forms» (Holmes 2013, p. 194). In D. Abrahamson's words, «It has long been the unique function of magazines, ra-

ther than newspapers or the broadcast media, to bring high-value interpretative information to specifically defined [...] audiences» (Abrahamson 1996, cited in Holmes 2008, p. ix).

Magazine journalism was not accorded a high status in the nineteenth century, as if it stood in parallel with periodical literature. Even in the twentieth century, the “traditional press” saw magazine publishing as one of the «low-status fields of journalism» (Holmes and Nice 2012, p. 1).

In general, magazine journalism has attracted much less academic attention than other media, in particular newspaper journalism. Despite the thousands of magazines available on the market, magazine research has not been a major focus for journalism, communication and mass media scholarship (Holmes 2008, p. 4). This holds true for many aspects of magazines that can represent an object of academic investigation, from history to ethical issues, from language to sociology, and so on (McKay 2013, p. 5). The results of a 2005 study revealed that, considering the number of research papers delivered at conferences, magazines were only the third most studied medium, after newspapers and multimedia; moreover, regardless of the type of medium, most media historians seem to prefer to concentrate on the nineteenth century (Holmes 2008, p. 5).

Furthermore, as Holmes and Nice (2012, p. 2) observe, «Academics studying journalism often use the word “magazine” almost as an unthinking pejorative», for example talking about «a magazine-style of journalism» (Chambers *et al.* 2004, cited in *ibidem*), or contrasting “serious journalism” with the “smiling professions” (which include lifestyle and consumer journalism) — while acknowledging that «the magazine sector [had] been leading the way for at least the past decade» (Hartley 2000, cited in Holmes and Nice 2012, p. 2).

And even when magazine journalism is taken seriously, this too frequently occurs in a dismissive way: «No overview of the British print media would be complete without *some reference*<sup>1</sup> to the periodical sector: those weekly, fortnightly and monthly

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<sup>1</sup> Unless otherwise specified, italics signal added emphasis.

publications which straddle the boundaries between journalism, leisure, entertainment and business» (McNair 2009, cited in McKay 2013, p. 6). As J. McKay (*ibidem*) notes, “some reference” conveys disparagement, if we think that magazines are a fundamental part of the periodical industry and that the magazine industry is considerably larger than the newspaper industry.

Let us now turn to a brief history of journalism in the Anglophone context, in printed formats, i.e. newspapers and magazines.

### 1.1. Print Journalism: An Historical Overview

In the development of the print media, the histories of newspapers and magazines have been closely intermingled (Holmes and Nice 2012, p. 3) and will therefore be treated jointly in this section.

In their surveys of print journalism, historians and media sociologists have tended to focus exclusively on its primary political function, which is to inform the public, neglecting its secondary but complementary function, which is to engage with the entertainment values and lifestyle requirements of the readership (Conboy 2005, p. 4). Yet, as Conboy points out, in its secondary function, journalism has made a significant contribution to a wider cultural politics (*ibidem*). In other words, «Journalism in both printed formats is best seen as the continuous recombination of novelty, information, opinion and entertainment» (*ibidem*).

The main contributors to the development of journalism are considered D. Defoe's «Review», J. Swift's «Examiner», R. Steele's «Tatler» and Steele and Addison's «Spectator», which appeared in seventeenth-century Great Britain (Conboy 2005, p. 6). Let us now move on to an historical overview.