

SCIENCE COMMUNICATION ON THE INTERNET: OLD GENRES MEET NEW GENRES

María José Luzón, Carmen Pérez-Llantada, eds.
Amsterdam/Philadelphia: John Benjamins, 2019

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Science Communication on the Internet is an edited volume consisting of 11 chapters addressing the latest trends in English for Academic Purposes and Applied Linguistics: professional and academic genres in the digital age. Drawing on numerous theoretical and methodological perspectives, the book comprises 10 case studies exploring the affordances and constraints of digital genres for science communication. Mirroring the book's sub-heading, this volume sets the foundations for new developments in genre studies, moving from 'old' genres such as the research article to the 'latest' innovations in science communication with citizen science projects. According to current European Union policies and funding agencies' requirements, scientists ought to engage in policies of Open Science, accessibility, and dissemination of science to diversified audiences (OECD 2015). This is a common concern in all the contributions, which examine topics related to academic communities, as well as health, engineering, chemistry, and other scientific disciplines.

The volume opens with a chapter by the editors, Luzón and Pérez-Llantada, who offer a comprehensive overview of genre theory, genre evolution, and remediation processes in the digital sphere. They illustrate the main theoretical concepts with examples of digital genres such as open science notebooks, enhanced publications, and scientific blogs. They close the chapter by recalling the main challenge of digital scientific genres: the need to address diversified audiences with different levels of expertise, leading to the context collapse of scientific genres (Marwick and Boyd 2011).

In Chapter 2, Harmon offers a detailed overview of the evolution of the research article since its origins in 1665 and wonders what its future might hold. After summarising the genre's formal evolution, Harmon reviews some of the main features and effects of the digital scientific research article, including the creation of new reading trajectories, enhanced interactivity, and the emergence of add-on genres. This chapter will appeal to any scientist curious about the most prominent genre in academic discourse.

Chapter 3 also uses the scientific research article as the object of inquiry. Mehlenbacher and Mehlenbacher examine the process of stabilisation and change in the research article. The authors point out that since the primary rhetorical exigence of the research article, i.e. sharing research findings with experts, has not changed over time there is a lack of rhetorical innovation in this genre. However, new rhetorical situations demand new genres, a reason why new genres such as the registered report have emerged. Although similar to the research article, this new genre answers a different rhetorical purpose: promoting replicable science. In this way, this genre emerges from the social demand for Open Science and Open Access, responding to macro-level policies of science.

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Hendges and Florek focus on the graphical abstract as the genre under analysis. The chapter starts by displaying a critical stance toward the context in which digital genres emerge, mainly discussing the marketisation and commodification of universities, knowledge, and genres. Consequently, the authors collect a sample of chemistry and engineering graphical abstracts to analyse their form, communicative purposes, contextual editorial policies, and interrelations with the traditional abstract and article visuals. Their findings are only exploratory, but it is possible to conclude that this genre is still under construction and that variability is found when dealing with how to create visual summaries and how to attract more readers for promotional purposes.

Chapter 5 is the only one dealing with spoken genres in the volume. Rowley-Jolivet and Carter-Thomas inquire about the similarities and differences between 3 Minute Thesis presentations, podcasts, and author videos. All the datasets have in common researchers talking about their projects in a short time span. Firstly, the authors identify the recurrent rhetorical structure of the genres (move analysis) and later they carry out an analysis of expert-lay communication recontextualisation strategies. The implications of their findings include similarities and differences between datasets which point at the marketisation of science, the need for brevity in the Internet era, and the recurrent use of linguistic strategies promoting simplification and a personal style. The authors conclude that these genres mix information with entertainment as if they were news.

A different genre is discussed by Breeze in chapter 6, whose work focuses on the open peer-review report and response, a new genre promoted by some biomedical

and life science journals seeking transparency and fairness. Employing corpus-assisted discourse analysis, Breeze compares two corpora of confidential and open peer-review reports to identify the advantages and disadvantages of the genre. Drawing on the concepts of relational work and stance, the author reports subtle changes in author response that empower them in relation to the referees. Moreover, she identifies more elaborate, complex, and interpersonal features in the genre due to its open nature. Despite the small-scale nature of the study, it offers a representative insight into a genre essential for all academics.

Maier and Engberg, relying on the multifaceted conceptual framework of knowledge construction, carry out an analysis of the Harvard Business Review website, which offers articles for both academics and practitioners. The authors apply knowledge mediation processes and explanatory depth to a textual and multimodal analysis of such articles. They find that hyperlinks play a crucial role in those processes in addition to add-on genres such as interview videos to address diverse audiences. Another important finding in this chapter is that while articles are mainly addressed to the academic community, the interviews included on the website focus on the practical skills relevant to practitioners. Hence, the complementarity of these two genres responds to the diversity of audiences.

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The next chapter by Mirović, Bogdanović and Bulatović draws on Maier and Engberg's conceptual framework to analyse the hypermodal article, a genre traditionally found in popular science magazines. The authors define this genre as hybrid, multimodal, and hypertextual aimed at recontextualising scientific knowledge for expert and non-expert audiences. Using close reading, the authors examine the embedded and hyperlinked genres of the articles as well as the combination of semiotic resources. They conclude that the combination of these elements contributes to the idea of context collapse by harnessing the Internet affordances for the benefit of the digital genre and online communication.

Moving on to the effects of social networks, Orpin analyses the recontextualisation of content in health-related tweets and reports. The thorough analysis carried out in chapter 9 rests on well-known approaches such as Hyland's proximity (2010), multimodality, corpus linguistics techniques, and macro textual structures. Orpin highlights the important role played by the intended audience in shaping the use of visual resources, text organisation, and phraseology of both genres, which leads to more professional writing strategies in reports and popularisation techniques in tweets.

Chapter 10 departs from previous topics since it focuses on the relationship between science/technology and religion. Smart and Falconer choose two genre sets with Vatican encyclicals at their core. After a short introduction to the genre, the authors draw on rhetoric, recontextualisation, and representation

work to understand the discursive changes suffered by this genre over a century and the effect of its digital transformation. Although their account is well-illustrated regarding the evolving relationship of the papacy with science/technology, a more critical stance towards the findings would have been valuable, going further into the challenges these genre sets may face or implications for future trends.

The volume ends with Reid and Anson's ethnographic study of a citizen science project. The authors provide a rich narrative of encounters, digital tools, and key moments in the development of science communication with the public. Interestingly, this study highlights the significance of contextual factors when writing texts, anticipating epistemic challenges, and how context collapse can be regarded as an asset in science-making practices. It recalls the importance of individuals in the stabilisation or change of genres, depending on how they engage in communicating science.

210 This volume provides a far-reaching overview of digital genres that illustrates the changes traditional (print) genres are suffering due to digital affordances. The breadth of theoretical and methodological perspectives is one of the strengths of this book. The case study format is useful for those interested in learning about digital genres or those who would like to explore less well-known research genres. However, the analysis of the genres in this volume shows innovation taking place only in the social and hard sciences. Given that the gap between the humanities and sciences needs to be further examined, perhaps this could be an aspect to address in future research. There are several possible questions that need answers. For example, are soft disciplines less interested in Open Science and genre evolution? Why are there fewer instances of digital genres in these fields? If all disciplines are to be considered equal, this is something worth investigating. Furthermore, even though the chapters can be read independently, and there are internal references between chapters that identify common points of inquiry, as a reader I felt the need for a concluding chapter summarising the main advances analysed in the volume. It would have offered valuable insights into the field of digital genres and science communication with comments on future directions for research.

Overall, this is a thought-provoking volume that will be enjoyed by experts but also curious readers and novice researchers entering the digital genre sphere. The detailed account of digital tools and resources will be useful for academics who should embark on non-traditional research practices. After all, researchers need to learn how to communicate science effectively by accommodating expert-lay audiences, harnessing the potential of the Internet, and maintaining informed and participatory citizenship.

Works Cited

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