



Science communication on the Internet. Old genres meet new genres

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To everyone working in the field of English for Specific Purposes, the notion of genre has enormous importance. Scientific and professional texts are only comprehensible if we approach them from a sound understanding of genre as the key to the way professional discourse communities use language to perform social actions. In the last ten years, however, our knowledge of professional genre repertoires has been increasingly challenged by the emergency of new digital genres, often existing in parallel with the traditional ones. This development has been particularly interesting in the area of scientific publication, where researchers and publishers have been eager to grasp the possibilities of Internet-based media. This volume makes a significant contribution to our understanding of this rapidly changing scenario.

The first three chapters pose the question whether scientific research articles have changed significantly during their transition to digital publishing. Some of their defining features are explored as they undergo this process, and emergent digital genres are compared with the traditional written genre in terms of form and function. The book here relies on six quantitative studies (Bazerman, Atkinson, Gross, Bank, Owen, Gross and Harmon) focusing in different ways on scientific publishing from the 17th through to the 21st century. The chosen perspective is fascinating to read, as it not only considers how the genre conception has become more complex, triggered by technological factors, but widens this view by incorporating rhetorical issues. Among other aspects, this means considering how the new genre responds to changes in social activities and circumstances, a line of inquiry proper to the original language for specific purposes approach. Luzón, Pérez-Llantada, Harmon, and Mehlenbacher & Mehlenbacher defend the stability of the research article in its essence regarding form and function even when it moves to the Internet (e-journals), seeing it as “preserving and extending existing functions and values”, supplementing and enhancing them, rather

than presenting a “wholesale reinvention that radically transforms a communicative practice”. This is explained on the basis that the modern science genre seems not to be an autonomous, disconnected entity, but rather forms part of – and collaborates within – a “broader ecology of genres” (Mehlenbacher). The chosen perspective paints a useful bigger picture of what the specific digital genres are and their relation with others. As these authors explain, modern articles on the one hand certainly do still follow traditional formal aspects such as the IMRAD model, and their function is predominantly pragmatically oriented, given their continuing epistemic commitment and their compliance with community norms. On the other hand, these authors also offer an interesting account of how the interaction between the visual and verbal text has changed in the transition to Internet, and has become much stronger, permitting all participants to explore and exploit new possibilities of communication. The underlying concept of continuity and change discussed here is addressed in all chapters of the book, forming a common thread.

Following on from this, several chapters (from 4-9, with the exception of chapter 6) address the new genres that have arisen through the use of digital affordances, specifically the graphical abstract (GA) (Rabuske Hendges & Salet Florek), videos (such as three-minute thesis presentation or author videos) and podcasts (Rowley-Jolivet & Carter-Thomas), and also multimodal recontextualizations of scientific texts through notions such as hyperlinks. For example, Maier and Engberg explore the concept of knowledge mediation and adjusting strategies, thinking particularly of the level of explanatory depth required for different audiences in order to manage the knowledge asymmetry between them. Besides, the new market-oriented tendency among the latest genres, which bear strong traits shared with promotional and advertising genres (Rowley-Jolivet & Carter-Thomas), is well explained. In line with this new promotional function, the increased multimodal elements are interpreted, such as the frequent use of colour and images to attract a wider audience. Moreover, the benefits and problems accompanying the democratization of science, converting it into a public good, are also clarified. In relation to this, the notion of networking, interoperability, open discussion and an intensified critical evaluation receive a special focus.

Lastly, three of the chapters offer a rather different take on digital genres. Breeze considers how open peer review has brought about changes in the way that referees and editors communicate with authors – and in the way the

authors formulate their responses or rebuttals. Smart and Falconer offer an interesting analysis of the Vatican discourse *Laudato Si* considering the evolution of its conception of science and technology, drawing from the promise that it constitutes a bridging genre placed in-between the digital and print genre. Last, Reid and Anson focus on polycontextuality and context collapse in Internet-mediated citizen science. In comparison to the former chapters, these focus more closely on the changing interrelated social communication and knowledge construction between, respectively, author responses and referees, some Popes and the Pontifical Academy of Sciences, and last, the public and an expert community in scientific digital, spoken and print-based genres. The opening up and increased visibility of these processes thanks to the Internet offer a privileged window onto the study of how these participants, whether experts, semi-experts or a wider, unknown public, interact and contribute to the formation and dissemination of scientific knowledge.

Coming to an end, this book offers a useful and realistic understanding of the complex panorama of digital genres in science, focusing on the emergence of new patterns and features afforded by the Internet which may one day configure new genre conventions. It also addresses the changing interactive communication system and the way it operates between scientists and a wider, open-for-all audience. In doing so, it touches on several related underlying problems, such as the question of quality control in digital media, or the radical reduction of scientific content that is inaccessible for the average audience. However, perhaps the strongest theme that comes through the chapters in this volume concerns the benefits of digital media, such as their vast potential for increasing knowledge dissemination, or the opportunities they offer to encourage the proactive incorporation of the whole Internet community.

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