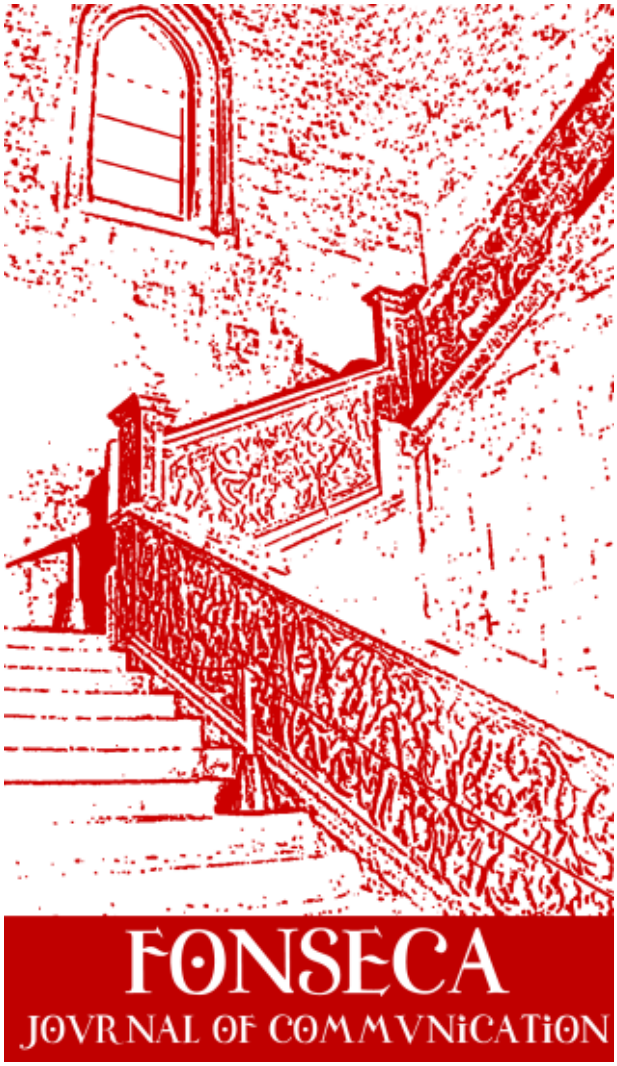
Scientific Journals Editor: Between The Dream And The Survival



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SCIENTIFIC JOURNALS EDITOR: BETWEEN THE DREAM AND THE SURVIVAL

Editor de la revista: Entre el sueño y la supervivencia

Maria das Graças TARGINO
Post-doctorado en Periodismo, Profesora de la Universidad Federal de Piauí
gracatargino@hotmail.com

Joana Coeli RIBEIRO GARCIA
Departamento de Sociología y Comunicación. Universidad de Salamanca
mrfidalgo@usal.es

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ABSTRACT
TV news program is the backbone of national, regional and local TV channels.
This type of programs has been changing over the time. The essence of the information is being modified and adopting a new format. Based on this principle, this research analyses the language evolution used on the Spanish TV news programs from its origins until today.
The current research has been carried out in three different phases: late 80's, 90's and nowadays. The use of both quantitative and qualitative methodology has allowed us to get deeper into our research.
The achieved results show that TV news programs have been acquiring a changing narrative style along its course: they began with an "objective" type of information, followed by a dramatic type of information using shocking visual content, to reach a dramatic type of information where the audience can identify and make aware themselves with the affected people in the news.
The information used as a show is the new identity mark of the current TV news programs to achieve greater levels of audience.

Key words: TV, news, information processing, language development, narrative spectacle of information, manipulation.

RESUMEN
Analiza el papel del editor científico, relaciona las habilidades necesarias para aquellos que anhelan ser editor y reanuda las funciones que él realiza en una revista científica. Revisa los conceptos clave, como editor y editora, edición y proceso editorial. Recuerda la tipología de las editoras, y, sobre todo, muestra que el editor vive la paradoja de responder a las cuestiones culturales del país en que vive (el sueño) y asegurar las ganancias por los libros que publica (la supervivencia). Describe el mercado editorial brasileño de las publicaciones científicas, en referencia a los títulos impresos y electrónicos. Destaca la mediación entre el autor y el editor y los dilemas inherentes a la función de generar la producción intelectual (de cualquier naturaleza); la mercantilización creciente de la producción intelectual y científica como producto comercial; la multiplicidad de funciones que la cotidianidad impone al editor; la cuestión cantidad versus calidad de los originales enviados a las revistas científicas. Por último, destaca la importancia del editor de revistas científicas, que garantiza la seguridad, la calidad y el reconocimiento de los títulos publicados y, por lo tanto, de la comunicación científica mediante el cuidado con la calidad de los trabajos científicos.

Palabras clave: Publicación. Editor. Revistas científicas. Revistas en papel. Revistas electrónicas.

1 Introduction

Man. Book. Writing. Communication. Science. Technology. Publishing process. These terms inevitably blend themselves and unite somewhere in time. Man's wish to dominate the nature by means of work tools, domestication of animals, ceramics handling and sintering, casting of metals, navigation and sailing, and creation of symbols representing vocal sounds, among others, compose the technological vestiges that make possible to rebuild the path of mankind across time and space.

The publishing process has accompanied man's trajectory throughout the centuries. Mechanical or electronic, it is conceived as an organized set of activities aiming at registering, and consequently, storing and / or perpetuating any information or knowledge through the technical preparation of originals to be published, which implies reviewing their form and / or contents, excluding the activities related to graphic production, in part or as a whole.

The editor is placed in the center of this process. From the viewpoint of etymology, editor (*editore* in Latin) is the one who edits. He is the one responsible for supervising and preparing texts for different publications. Additionally, he is also accountable for the publication of texts of any nature, prints, sheet music, records etc. Whatever the meaning is – art editor, sound editor, image editor, literary or critic editor – the fact is that, notwithstanding the various names and contexts, the editor is essentially the one who concretizes publishing activities with higher or lower level of complexity.

The editor has been perpetuated since the cave inscriptions and paintings. He has traveled from the cave to the world of informatics, since the term is now used to designate software for electronic texts, such as *Microsoft Word* (by *Microsoft*) and *Corel WordPerfect* (by *Corel Corporation*). Upon the development of writing, copyists started to reproduce works, thus acting as editors, although sometimes they changed the originals and made reading more difficult. With the arrival of João VI to Brazil and the official creation of the press in the country in 1808, the editor's function started to be performed by typographers who were assisted by printers. At the beginning, the editor was an erudite person who refined the text, in addition to copying it. After Gutenberg, this literate person gradually started to play the role of editor in the sense we

see today. The editor assumes the function of publisher as it is referred to in the United States of America both for the house publishing the texts and the professional in charge of their publication.

Currently, the editor continues to exist as the person responsible for the publication of literary, scientific, artistic, musical and electronic works. However, in face of the technological advances and growing commercialization of intellectual, cultural, scientific and technological production his activity assumes new features such as the capacity to deal with the commercialization of products bearing in mind their quality, as well as facing the ethical issues that permeate the relationship among the social agents related to the publishing process. We must admit that profit is the utmost target of commercial editors. When it comes to the editors of scientific publications, profit yields to the growing need for self-management, as well as for more autonomy and freedom.

In this respect, Ênio Silveira, head of Civilização Brasileira publishing house for over 40 years, affirms that, in concrete terms, editors must be attentive to "beans and dreams"[1] simultaneously. The publication of a work must add profit to the publishing house so as to guarantee the subsistence of those depending on the entity, without ignoring the artistic side of the product, thus contributing to the strengthening of the Brazilian market of cultural goods and the population's cultural heritage (FERREIRA, 2003). When it comes to the scientific editors, "beans and dreams" also mix up, as "beans" represent the fight for survival (profit), which, in turn, leads to the "dream" of guaranteeing the credibility of the work in question.

In Brazil, as provided for in article 5, item II of Law No. 10753, of October 31, 2003, which institutes the National Book Policy, the publisher is both the individual (editor) and legal entity holding reproduction rights and providing the features needed for handling of the product. This norm provides an entirely restrictive definition of author and editor, attaching these terms uniquely and exclusively to the publication of books. However, our focus is on the performance of the editor as an individual, especially those working with

[1] Literal translation of the Portuguese words "o feijão e o sonho," considering that "feijão" (beans) – which is an important food item in the everyday life of Brazilians – represents the means to survive, in opposition to one's ideals or dreams ("sonho").

technical-scientific or scientific periodicals, including academic journals containing scientific principles.

Moreover, our focus is especially on scientific editors. This is so because, editors in general, are responsible for issues related to the particularities of each title and formation of the team. According to Bishop (1984) and Meadows (1999), large journals count on both the scientific editor and managing editor. In ideal terms, the first is essentially responsible for the selection and evaluation of contents, while the second is accountable for publishing issues, assuming that researchers / scientists / academicians are not familiar with the technical preparation of the originals. This duality rarely takes place in Brazil and Spain, especially within the scope of human and social sciences.

Additionally, our interest in journals, amongst all scientific works, is based on the fact that, thanks to their periodicity, these publications guarantee not only the access to updated information (at least ideally), but they also provide distinctive points of view about one issue, allowing a deeper knowledge about various matters. They favor the preservation of knowledge, its dissemination, and the establishment of scientific priorities, once they operate as an instrument for scientific recognition. In the context of the academy, they constitute a complex social and cultural phenomenon. Scientific journals are more than a mechanism to disseminate research data: they also relate to the academic reward system and the recognition by peers, thus playing a vital role in the validation of the scientific studies performed. Authors, editors and users direct strong investments to the edition of such publications, which proves the continuity of their importance within the scope of scientific communication in the 21st century.

On the other hand, an increasing number of scientists, researchers, academicians and editors tend to accept the production and distribution of scientific and technological information (STI) by electronic means. Until the end of the 1990s, their preference was concentrated on printed publications, since the use of the cyber space was mainly focused on electronic mail rather than aimed at obtaining information or publishing works. A study comprising 540 researchers from all regions of Brazil concluded that, at that time, this fact derived from cultural and social conditions, in addition to the “magic” of paper,

the convenience of reading printed materials and, above all, the uncertainty about the future of electronic publications (TARGINO, 2006).

Nonetheless, such concerns have vanished throughout time, thanks to factors such as the adoption of evaluation requirements for electronic publications as a means to ensure the quality and credibility of scientific works, and, especially, the global moves towards free access to information, in addition to the alternatives allowed by the electronic means, which have gained ground by allowing people to express their ideas and thoughts. Examples such as the "open-source journalism," which makes possible for "common" people to participate in the construction of information, and the current popularity of the wiki technology, are more than mere technological products. They represent a philosophy of action, and distinguish themselves by disseminating updated information of general interest and in different languages, favoring the participation of the public in the information flow. These innovations may, in the course of time, interfere in the traditional forms of publication of scientific journals, or even in scientific communication processes in general.

In other words, these initiatives reinforce electronic scientific journals and change the features and functions of the editor. In this sense, firstly we will present some conceptual and typological basics, and, further on, stress the dilemmas experienced by scientific editors in the context of scientific communication.

2 Reviewing concepts and…

In conceptual terms, the word publisher is used to designate public or private organizations whose core activity is the publishing process of printed or electronic means. However, the day-to-day use of the word publishing is polysemic. According to Rabaça and Barbosa (2002), the term has three meanings. The first is related to the editor's specific tasks, which include the search and selection of originals, negotiation of copyrights and translation rights, layout definition, distribution of originals, markups, copy-desk activities, reviews, graphic supervision etc.

The second meaning of the word has a broader sense and refers to a set of activities that, in addition to the above mentioned tasks, include those attributed to printers – composition, printing or making the materials available on a network –, to distributors – intermediation between the editor and booksellers – and those related to bookselling. The latter makes the materials available to the public, although, in the context of electronic communication, booksellers are replaced by vendors, whose actions are carried out in a broader scope, in theory. This concept covers all phases of the process: (a) pre-industrial phase – functions that are specific to the editor, such as the search and selection of materials; (b) industrial phase – composition, printing and finishing. (c) post-industrial phase – promotion and commercialization of the product. The third meaning of the word is even more flexible and includes publishing of any type of cultural dissemination support, such as records, microfilms and CDs.

The term edition also has various meanings. It refers to the set of copies of the same work, as result of one or various print runs, as long as there are not substantial changes between them. It also designates the unit of a periodical publication – the number of a newspaper, magazine or any other type of periodical publication. It may also have the same meaning as fitting up or be a synonym of publishing, whenever expressing a set of activities related to production, publication and distribution of printed or non-printed texts to any type of means.

Editing and publishing; editor and publisher are terms used indistinctively. As explained above, the editor can be an individual or institution, with or without commercial purposes, that makes the product available to the public in various formats, acting as an intermediary between the author and the market. In other words, some commercial and institutional publishing houses are assuming the distribution activities, making possible for their products and services to be available to consumers at bookstores, sale spots, newsstands and book fairs.

In this case, the term editor is similar to the term distributor (Rabaça, Barbosa, 2002). However, depending on the reach of the means and the profile of the target-audience, the publishing house may use the services of commercial firms, cooperatives, associations, professional boards, unions and other means that may guarantee the supply to local, regional, national or international

audiences and, consequently, consolidate the works in the academic and scientific community, favoring their inclusion in national and foreign databases. Additionally, the term editor may refer to the entity or individual that creates and maintains, from the economic and legal viewpoint, one or various periodicals. It may also designate the individual that heads the coordination of publishing commissions, also named responsible editor, or simply editors.

3 ...Typology

Apart from conceptual discussions, there are different types of publishing companies nowadays. Just as it happens with other forms of classification, the proposal made by the American researcher Donald W. King in the 1990s is not a consensus among editors and experts, although it is still very popular in the present. It consists in grouping publishing houses according to the nature of the institution to which they are attached, and consequently, considering their institutional targets. Thus, publishing houses can be classified as follows: (a) scientific societies or professional associations; (b) educational institutions; (c) manufacturing or companies; (d) governmental agencies; (e) non-profit institutions; (f) entities that do not fit in the above mentioned groups.

This diversification shows that although – since its beginning and according to the *Royal Society of London* – the dissemination of scientific knowledge was of exclusive responsibility of scientific societies and professional associations, while the contemporary society has seen the growing influence of higher education institutions and research institutes. In face of the possibility to negotiate the scientific production and scientific journals, universities, research institutes, scientific societies and professional associations are associating to commercial publishers under partnership agreements. Under these contracts, the publications are of direct responsibility of the researchers and, indirectly, of societies and associations. Upon the expansion of the information industry, journals became a business issue. Presently, the scientific community is trying to retake the control through partnerships with commercial publishers.

In the United States, for example, there is a significant influence from large universities, which, in general, have good publishing houses. Scientific societies

are also representative in the market of scientific publications, as, for example, the *American Astronomical Society*. Despite that, university publishers account for less than 10% of the production offered by the academy, even though journal subscriptions represent some 66% of the resources assigned to the acquisition of materials by U.S. libraries and produced by publishing houses of different natures. (TARGINO, 2006). Surprisingly, there are no signs of relevant changes in this respect. On the contrary. Fairly recent studies point to a similar trend. Statistic data collected from 123 libraries associated to the U.S. *Association of Research Libraries* point to a 273% increase in expenses from journal subscriptions from 1986 to 2004, against a 63% increase in the case of books. From 2003 to 2004, the average spending with subscriptions exceeded US$5.5 million. In the same period, electronic resources consumed some 30% of the budget assigned to the formation of collections (LEMOS, 2005).

In Europe, except for the Cambridge University Press and Oxford University Press, educational institutions and professional entities do not exercise relevant publishing functions that may exceed the segment of journals. In Brazil, commercial publishers "reign" almost absolutely in the segment of books, notwithstanding the partnerships that are currently gaining strength. Thus, in face of the difficulty to publish good journals that may maintain their continuity and regularity, Brazilian people have to afford at least three items to make the scientific communication feasible: research costs; researchers' compensations and the maintenance of libraries, according to Lemos (2005). This situation occurs in spite of the battle for the publication of electronic journals with free access, repositories or aggregators allowing a free use of information.

In short, there is significant distance between commercial publishers and other publishing houses. In addition to quantitative aspects regarding the number of published titles, commercial publishers are winning market niches and prestige on the account of the good quality of their products in general. This situation, however, refers to the book segment. Regarding the publication process of scientific journals, circumstances are quite different. Most of the time, the publication of such titles is under the responsibility of scientific societies and universities.

However, when reviewing the international market in order to have a better understanding about the situation of the Brazilian publishing sector, the reference to *Elsevier Science* publishers (http://www.elsevier.com), with headquarters in Holland and approximately 70 offices in 24 countries, became mandatory. Its importance relies on the increased number of publications, as well as the relevance of these materials and the extent of its presence. After 125 years of existence, the company publishes two thousand journals and 17 thousand books, of which 1.9 thousand are new editions. It staff comprises seven thousand editors, 70 thousand referees, 200 thousand proofreaders and 500 thousand authors. Elsevier's editions are basically in English and include the most relevant articles within the scope of scientific research. The company's circulation levels are amazing. Its products include scientific information related to the first, second and third publishing levels.

Finally, we highlight that the actions taken by publishing houses regarding some aspects should be discussed. They include: (1) centralization around an elite group; (2) continuous launch of printed and electronic journals; (3) inequality in the production of titles from the geographic viewpoint, concentrated in the U.S.; (4) performance of European companies and their gradual internationalization, since, considering that Europe includes small countries with different languages, the adoption of the English language is stimulated, as in the case of Elsevier Science.

These issues point to the complexity of the production of scientific journals, and, consequently, the action of editors in Brazil or Spain. In addition to the prevalence of North-American publishers and the performance of publishing groups that suffocate more "ingenuous" initiatives in a global context, there is a clear movement toward the formation of elites that inevitably include authors and editors. Without entering into details, once this topic would be more appropriate in discussions about authorship and production, and including the principles provided for in the *Productivity Law* or *Lotka Law*, the most renowned scientists, in fact, write for the most prestigious journals and quote other scientists who also collaborate to these publications. In other words, science is made by just a few. According to the Brazilian speaker Cláudio de Moura Castro, the scientists awarded with the Nobel Prize constitute a significant

archetype: they start to publish their works from early ages and continue to produce for a longer time, reaching the average of 3.9 works per year.

This is the so-called “Matthew effect,” by analogy with the “Gospel According to Saint Matthew” the best become even better, while the weak, become weaker; those who have possessions will get more, but those who have nothing will be deprived of the little they have. This is to say that the publishing market (scientific and commercial editors) contributes to the consolidation of accumulative advantages. In principle, researchers recognized as important for science are motivated, and even forced by their colleagues and institutions to maintain their prestige through the publication of new studies. This recognition favors the execution of their studies, since it includes funds, extended time, competent assistants, various information sources and support from their peers, which directly interferes in their productivity. Oppositely, scientists with lower production volumes or whose studies are not recognized tend to reduce the rhythm of their activities due to the lack of encouragement and resources.

Within this same line of thought, the valorization of scientists from peripheral countries is far more difficult from the editorial point of view. In any event, it is difficult to hurdle the barriers imposed by large international publishing companies and join the universe of authors included in the frontline of publications with wider circulation. According to Castro (1997), Brazil produces science for internal consumption. That is a fact, especially, in the field of human and social sciences. But there are reasons for that. Life science, engineering, exact science and geosciences are the most published abroad, since these subjects are more universal than human and social sciences. If, on the one hand, social, economic and cultural issues are specific to countries, regions or states, like the drought in the Brazilian Northeast, on the other hand, there is no physics that is specific to Brazil’s Southeastern region or a Scandinavian chemistry. So, scientists researching basic areas address to a wider audience, thus having more chances to be recognized. By the way, it is precisely the achievement of recognition outside the countries in which they work that make possible for them to have greater opportunities of achieving national prestige.

Additionally, and in the case of Brazil, the Portuguese language imposes limits that result from its lower representation in the areas of science and technology

(S&T), and thus, in the communication flow of Portuguese-speaking nations. Consequently, social scientists have only two choices, according to Castro (1997, p. 128, our translation). The first option is to publish their studies abroad, which implies the use of the English language with the purpose of achieving some prestige, "[...] however, banishing their work from their motherland and achieving glory through oblivion." The second alternative is to publish their works through local or national publishers, having greater chances to be read, but stimulating "[...] some intellectual incestuousness by risking to give local explanations for universal phenomena [...]"

In turn, the quantitative dimension of scientific journals is also controversial from the viewpoint of publishing and scientific production. The production of a country can be easily evaluated. However, these figures are meaningless if they are not compared to those of other countries, at the same time that international comparisons always bring difficulties and ambiguities due to their extent. In principle, there are some questions about the conception and features of scientific journals, as discussed by Bishop in 1984, and subsequently, by Meadows (1999). For example: publications like the *Annual Review of Information Science and Technology*, which do not contain original contributions to science, but only literature reviews, can be considered scientific? What is the proportion of original contributions to be given by a journal so that it can be considered a scientific publication? How can originality levels be measured? And so forth.

Additionally, the problem also involves publications that "are born" and "die." There are also those that are united under a single title or, oppositely, divide into other titles, like the *Philosophical Transactions* and the IEEE [*Institute of Electrical and Electronical Engineers*] *Transactions*, which, according to data of January 2010, constitute a "family" of 132 periodic publications of distinct natures. Some publications maintain, simultaneously, printed and electronic formats with little difference, just like the journals on communication of greater recognition in Brazil and Spain respectively: *Intercom: Revista Brasileira de Ciências da Comunicação* (http://revcom.portcom.intercom.org.br/index.php/rbcc) and *Comunicar* (http://www.revistacomunicar.com). Others just have their formats changed from printed to electronic like

Informação & Sociedade: *Estudos* (Federal University of Paraíba). There are also some that disappear and reappear later on, like the Brazilian communication journals *Ícone*, *Signo* and *Cambiassu.* Everything, or almost everything, is possible in the new editorial universe of technical and scientific journals.

4 Between "beans and dreams"

Thus, considering the above issues, which influence the action of editors, we corroborate the dubiousness of their work. If, on the one hand, there is a romantic aspect that permeates the activities of an editor, on the other hand, the production of literary or non-literary texts, which are artworks permeated with dreams and feelings, in the likeness of a sculpture or a jewel that is perfectly polished, or a garden carefully planned (KUNSCH, 2004), requests from scientific editors to have a tough routine, whose topics are described by Greene (1999). In other words, considering the tasks of individual editors, on whom the quality and prestige of a journal are strongly dependent, it becomes clear that the distance between "beans and dreams" starts with the profile of the professional selected to perform the functions that are inherent to his position.

Requirements and skills

Some requirements and skills are indispensable to scientific editors. In principle, this professional needs to keep up with national and international S&T policies so as to be aware of domestic and foreign trends and remain attentive to the subjects that emerge or disappear, within the gatekeeping philosophy. Having a managerial background is essential to handle market fluctuations and the changes that affect the contemporary society. This requires an accurate capacity of analysis in order to make decisions in a rational manner, without despising creativity or ignoring the rules governing the relationship with other agents involved in publishing activities, from authors to proofreaders. Thus, editors need to have a comprehensive view of the world, which includes general and specific knowledge (related to graphic production and mechanisms, and production methods and systems), and sensibility to deal with his own

limitations, as well as the limitations of others, guaranteeing an atmosphere of cordiality among the various agents involved in publishing activities.

Functions

Fixing the editorial policy to be followed by the entity / company / periodical, and, especially, ensure its maintenance, is a principal function of the editor. Depending on the structure of the organization, the editor divides the responsibility with advisors grouped in editorial commissions (or committees or boards), and counts on external members for *ad hoc* consulting.

Editorial commissions include specialists with expertise and credibility preferably among the researchers of the entity supporting the publication or similar entities, so as to facilitate networking and meetings, while the members of advisory boards may act in a single edition of a publication or for a given period. It is advisable for scientific editors to invite specialists from other institutions located in the same State or in another State, or even from other countries, taking into account the issues discussed in the text. It is also recommended to substitute them regularly with the purpose of avoiding endogeny or a certain accommodation as result of routine and extended actions, with exceptions.

In addition to fulfilling refereeing duties, advisory board members should recommend and stimulate the dissemination of the publication in their geographic area by suggesting the title to other researchers, making possible to enrich the articles written by authors from other publishing institutions. Moreover, the substitution of permanent or *ad hoc* advisors is always recommended. This strategy benefits all the agents involved in the process: authors, whose originals are analyzed from a new perspective; referees, who are able to take over new responsibilities; editors, who can have access to different information; specialties and audiences, who can take advantage of new ideas; and, finally, the publication itself, which is able to maintain the information updated and avoid stagnation.

Moreover, scientific editors themselves should avoid maintaining the control for extended terms, or changing it constantly. The first case involves

accommodation risks, while the second generates instability, making it difficult for the journal to build an identity and have its own features. The problem is precisely to define the perfect timing, which requires some feeling and systematic appraisals on the life of the title, covering items such as: total of articles submitted, accepted or rejected; place of origin and professional attachment of the authors and referees; print runs; acceptance; typographic quality; circulation; unsold editions and other.

In any instance, the maintenance of an editorial staff gives confidence to peers, who rely on the use of the contents published. However, we should not concentrate our attention only on the formal existence of such commissions. Reliability is the most important factor, since it would be false to deny the existence of ineffective arbitration systems, considering the lack of qualifications of the members and the atmosphere of subjectivism and favoritism surrounding final decisions.

This demonstrates that to maintain and consolidate a publishing line requires from scientific editors the fulfillment of various functions, which should adapt to each reality. Depending on the team or the existence of a managerial editor, the routine includes the execution of regular tasks (copy desk, proofreading, graphic supervision etc.), as well as decisions about the contents to be published, priorities, investments in new specialties, stimulus to emerging areas and diversification of subjects, guarantee harmony between offer and demand, implementation of adjustment plans, and strengthening of quality filters.

Moreover, according to Bishop (1984) in his classic book on the publishing process named *How to edit a scientific journal*, in the condition of gatekeeper, the editor is expected to keep up with the novelties in the area and select information to peers, performing the intermediation between authors and readers so as to decide what the public will read. In other words, the term gatekeeper is used by the publishing area to define the one who integrates and conciliates the different interests of authors, audience, publishers, graphic arts companies, titles, specialties and the editor itself, stimulating the effective interaction among authors, translators, advisors or consultants, society and readers, supporting institutions and advertisers. Despite some resistance, the latter have gained space in scientific journals due to financing strategies and,

consequently, to guarantee a regular periodicity and wide circulation for the periodical. The inclusion of advertising materials does not mean loss of quality or infraction against ethical principles. However, it has some precautions: seriousness of the advertisers; insertion of materials of public interest or having affinity with the issues discussed in the title; function of the products advertised etc.

Going back to the functions of the scientific editor, even when his expertise results only from his empirical experiences, which should be accumulated during a period of eight years on average (Bishop, 1984), the most important is to use the knowledge he has about his area to exercise quality control. He must also count on the effective assistance of managing editors with expertise in the area and dispensing fulltime dedication to their functions through the assistance to the researchers/scientists/academicians responsible for the journals. However, in everyday life, such distinction is not a reality, especially regarding the educational institutions of Brazil and Spain. Professionalization levels are jeopardized. Scientific editors have parallel functions such as teaching and researching. It lacks compensation incentives for assuming one more responsibility. In most cases, as reported by Garcia and Targino in their previous study, of 1999, editors are teachers. With no experience or educational background, they inevitably recur to “on-duty” training. But the worst is that they frequently extrapolate the functions that are inherent to their position in order to take over the control of the intermediation between editors and booksellers, and distribute copies.

In consequence, below we summarize the operating functions of the scientific editor – related to both printed and electronic titles – in a more didactic manner:

- To define the basic profile and the line of action of the periodical, by designing editorial policies and standards, in addition to graphic parameters (layout / text design, number of works and pages, format etc.) in line with the expectations of the supporting institution and target-audiences.

- To create innovative publishing policies and projects in line with open access sources and, consequently, define copyright regulations to be adopted by the periodical.

- Officially represent the journal, whenever needed.

- To chair editorial commission meetings (or similar) and execute the resolutions approved.

- To monitor the mandate of editorial commission members (or similar).

- To choose the members of the advisory board.

- To guarantee an agile, constructive and interactive evaluation system.

- To execute budget and financial policies.

- To negotiate financing sources for the publication, including the insertion of ads.

- To manage the publication with the purpose of turning it into a self-sustainable and profitable source.

- To execute purchase and sale agreements on copyrights.

- To stimulate the production of originals by attracting high-quality authors and texts.

- To design the guidelines for the promotion of the periodical before libraries and documentation centers, emphasizing the title's inclusion on databases and / or its insertion in portals of periodicals.

- To participate in book fairs, autograph sessions and other events that may promote the publishing house and the titles in circulation.

- To present regular reports to the institution supporting the journal.

- To perform activities related to the needs of the periodical.

- To maintain the independence and the reach of the publication in the international, domestic, regional and local contexts.

- To follow up the evaluation criteria used for periodicals in the national and international scopes.

Underlying such actions, scientific editors must be attentive to the search for excellence and maintenance of ethical standards. In other words, scientific editors of technical and scientific journals perform diversified functions, playing the role of creators and managing publishing policies and projects, being themselves authors and stimulating the scientific production of those integrating the potential audience of the title. They must also be a fair and transparent referee, advisor and a supporter of editorial freedom.

5 *"The beans and dreams"* continues

Based on the review of the operating functions expressed above, everything, or virtually everything, can be applied to the electronic world for one simple reason: electronic journals are just scientific if concerned about the scientificity criteria effective for printed materials. Discussing about the scientific journal is not only to recognize it as a facilitating element of the formal process of communication and knowledge. It is much more than that scientific production is, in its essence, intellectual production. As a result, whether in the electronic or printed formats, scientific titles can reflect the science and the community of scientists of a given country or subject area and, which ultimately means to evaluate the development of a nation.

The controversial expression periodical / electronic journal has been generically used for any title in electronic format, including those existing in both forms, printed or electronic, in addition to those created for electronic means and only available in this form, and those available in CD-ROM. In turn, the scientific electronic journal designate only those provided with control and assessment mechanisms. Unlike the editors who limit themselves to the creation of a beautiful website showing texts in PDF formats, scientific electronic journals maintain content management, editorial quality, permanent filing of articles, contextualized recuperation, digital preservation, indexing and universal access. In other words, they follow critical review standards, once quality is inherent to scientific behavior and a minimum requirement for changing the *status quo* of science.

It is unquestionable that scientific electronic journals do not disregard the role of the editor. These professionals have responsibilities that are similar to those working with the printed format, that is, focus on maintenance of quality, as previously seen. It falls to each of them to make adaptations to their specific realities, as it already happens with printed publications, once there are distinct editorial projects and policies. Within the context of free access to information, these projects involve multiple options, beginning with the type of agreement executed with the author. Those are decisions related to copyright issues that are still unsolved in today's' highly electronic society.

There have also been some changes related to the publishing process itself. For example, articles are received, evaluated and made available on the internet without the use of paper. The whole publishing process takes place through electronic contacts among editors, referees and authors. The distribution, that is, the final dissemination of contents is made through specific software (list servers). Upon the conclusion of books or articles, the users included on these lists may receive the summary, the full article, or the complete book. All of them can reach your computer. Whenever requested, non-electronic versions may be delivered subsequently, as a supplement.

Other titles put new articles into circulation upon the evaluation and acceptance of their contents, while others are similar to printed journals, grouping these articles in fascicles and publishing their contents at once. Some journals accept

the inclusion of charts, while others, continue to reject them. Sometimes, users are allowed to have initial access to the summary. Other times, they may have access only to the abstract. Complete versions of the texts can be requested frequently, whenever needed. Many editors choose to publish the full text of the articles. Diversity is also present in the system of subscription to these titles. Unlike printed materials, whose value is always available for consultation, the price of electronic journals is quite variable. It depends on the formation of the titles and / or fascicles, the material requested by users, the type of agreement and so on. There are also contracts containing non-disclosure clauses that prevent consumers from revealing the amount paid.

This variety of options confirms the facilities offered by technological innovations, as well as changes in business models, and reveals the level of flexibility of publishing houses and editors. Academic and scientific communities, as well as the society, get strength from electronic titles as a form of freedom, thanks to the easy access to updated information at no cost. Notwithstanding the inaccuracy of the figures about the electronic environment and its ongoing expansion, it is said that there are some 70 thousand free-access journals worldwide, among which, only 25 thousand are adequately evaluated. For example: the *Portal de Revistas Eletrônicas de Ciências da Comunicação* (Revcom, http://revcom.portcom.intercom.org.br), which allows the access to full texts of yearbooks, newspapers and journals without the need for a password, was created with the simple purpose of contributing for the development of research in Portuguese-speaking communication science.

However, just as any other electronic subscription, in some cases the access to the materials is made through a password, as it occurs with the text by Tenopir (2005) about scientific journals issued by commercial publishers. The electronic access to this material is paid, but it can be freely accessed by entities having internet licensing. Indeed, the term subscription may not be appropriate, and it could be replaced by “lease,” once subscribers do not “own” the electronic materials they utilize, and prices are not that popular as they were expected to be in the beginning, which reinforces the need for free-access electronic journals and repositories.

In this case, as described in the *Manifesto Brasileiro de Apoio ao Acesso Livre à Informação Científica* (http://www.ibict.br/openaccess/arquivos/manifesto.htm), authors or holders of exclusive rights on contributions should allow free, irrevocable and unrestricted rights to readers, who will access and disseminate the information through any digital support, taking into account the ethical principles of authorship. As to editors, the movement to support the so-called *open archives* and free access to information also predicts changes in the behavior of commercial or non-commercial publishers. In summary: journals are totally open and free, or they provide for authors to place at least once copy of their work on an open-access repository, in order to make possible for end users to enjoy the unrestricted right on information access. As per the directions of the *Instituto Brasileiro de Informação em Ciência e Tecnologia*, Brazilian Science and Technology Information Institute (Ibict, 2010, p.1, our translation):

> A Commercial publishers of scientific publications must:
>
> 1. Agree that the works published by them and executed by researchers whose scientific activities were supported by public resources, must have a copy deposited in a free-access repository;
>
> 2. Make available an electronic version, on a free-access environment, of the printed works published by them and written by authors whose research was supported by public resources.
>
> B Non-commercial publishers are advised to:
>
> 1. Make available an electronic version, in compliance with the paradigm of free access to information, of the printed works published by them.

2. Adopt standards that are in accordance to those established by the *Open Archives Initiative* (OAI).

In addition to such decisions, which are essential for the survival of the titles related to subscriptions and distribution, the editors of electronic publications need to invest in interactivity. After all, the opportunity of integration and interaction between the users and the journal, authors and readers – which is not possible through printed materials – represents a breakthrough in electronic networks within the scope of scientific communication. This is the historical time of dialogic documents that reflect the interactive nature of the academic production and discourse.

As a result, scientific editors have intensified the publication of comments made by referees and the corresponding replies from authors. They also stimulate the exchange of e-mails, opinions, debates and the formation of discussion groups among the players of the publishing cycle. The electronic scientific journal becomes an interactive mean that leads to the democratization of S&T. The notions of author and reader merge into each other. The text is not static. The ultimate version of a text has ceased to be a clear notion. It encompasses a growing number of academicians who participate in the communication process by operating relevant changes, turning it into a fast, globalized and participative system. Preprints are replaced with e-prints, whose importance has been increasing in the organization of scientific production, as stated by Weitzel (2006) in her thesis.

However, in spite of this diversification, it is unquestionable that the authors and society will not disregard quality control. All the precautions related to peer reviews of printed scientific journals, including the formation of publishing boards, are also applied to electronic publications. They are continuously improved thanks to an almost instantaneous feedback. Just as in any evaluation system, deficiencies continue to exist. Nonetheless, it is possible to increase its efficiency, transparency and validation. A more equitable distribution is possible, once the selection of referees may follow a comprehensive and universal plan

aiming at reducing “contamination risks” and including names that are present in surveys, discussion bulletins and bibliographic citations, in addition to accepting possible volunteers, regardless of their geographical locations, increasing the chances of scientists to participate in peripheral countries. Another positive item is the speed with which manuscripts are electronically sent for appreciation.

Everything confirms the presence of the editor as absolutely required, as it happens with printed materials. This is so, because the possibilities to increase the number of readers, the reach, and the impact of the title published are more expressive, as result of the opening provided by the web itself, which makes publishing processes faster, reduces costs, and, over all, has greater chances of continuous improvement.

On the other hand, the care about the materials published – not only in terms of wording, but also regarding credible and consistent contents, persists and expands editorial responsibilities. More than ever, the editor needs to maintain the harmony of the texts included in a fascicle, in case the choice is to make collections available, instead of isolated works, so as to maintain the textuality and written cohesion related to a methodological framework, preventing the title from looking unshaped due to the discrepancy of techniques and methods employed.

Similarly, more than ever editors need to maintain the harmony among publishing agents, so as to avoid information chaos and dissonance. Such aspects give strength to the Sistema Eletrônico de Editoração de Revistas (SEER), a software used in the development and management of electronic periodicals and originally created by the *Public Knowledge Project* (*Open Journal Systems*, OJS) of the *University of British Columbia*. In Brazil, the system was translated and customized by the Ibict (http://www.ibict.br), and made accessible to editors of electronic titles, which helped to improve the editorial standards of domestic publications. There is no information on the adoption of this project in Spain.

Thus, electronic journal editors continue to have the same functions as quoted above. However, new responsibilities arise, as summarized below: (a) political definition of editorial positions, which requires keeping up with international

discussions on scientific communication and free access, so as to improve the alignment of the title and disseminate contents; (b) business management, which implies to restrict, in managerial terms, the survival of the journal as business and assume total responsibility for the title, counting on the support of SEER or a similar instrument; or choose a partnership regime, and, in this case, the type of partner and contract. (c) technological skills, which, in addition to the aforementioned abilities and requirements, also demands technical knowledge to negotiate, with web designers or webmasters, and other computing professionals, the most suitable options for certain target audiences, and above all, the knowledge about the technological potentialities of the virtual space by using indexation and automatic search engines.

In order to do so, the editor may associate to comprehensive journal projects, such as the *Red de Revistas Científicas de América Latina y el Caribe, España y Portugal* (http://redalyc.uemex.mx); the *Directory of Open Access Journals* (http://www.doaj.org); the *Scientific Electronic Library Online* (SciELO, http://www.scielo.org); and the above mentioned *Portal Revcom*.

6 Editors in face of intervenient factors: synthesis

Finally, we need to consider the researcher / scientist / academician, either as editor or author, as a social agent whose technical and scientific production should contribute to projects with the purpose of transforming social relations and the social order. As a researcher and, consequently, as an author, should define research lines or priorities aligned with the demands from the community. As editor, he needs to win the vicious circle of the practical problems affecting the scientific journals – publishing process, periodicity, distribution, selection of contributions etc. – in order to guarantee quality. All this requires joint efforts from all agents in the publishing chain, as well as political decisions taken by the management.

In this sense, printed or electronic materials essentially represent a format. The truthfulness of contents is the most important element for the editor, who faces difficulty and hindrance regardless of the physical support of the publication. Such barriers start from the terminological fragility characterizing his field of

action. We recommend a review of the concepts involving the terms editor, edition, and editing, without taking into account the Latin verb *editare.* We may go far back in the past and identify them as originated from the verb *eddere,* or to give birth. This figurative sense is similar to produce, exhibit, show. Thus, we conclude: under different features, and facing the dilemmas that are inherent to his function, the editor gives life to intellectual production, being it literary or not.

Not taking into account the distorted view of those who see the editor as a mere proofreader (just like in the American movie "The Holiday," produced in 2006), the commoditization of intellectual and scientific production is another barrier to his activity. Like any other information system, STI has failures, once S&T are influenced by the ideology that is inherent to capitalist societies. Science favors the generation of technology aimed at multiplying the capital. As a result, S&T become ideological and mercantile processes, just as it occurs with the press in general, and the scientific journalism, in particular. Once they are inserted in the capitalist production system, they assimilate not only symbolical dimensions but also economic connotations, which frequently cause damage to the genuine demands from society, with serious effects on the decisions to be taken by the editor in any of his features – as scientific editor or managing editor. STI assumes the traits and configurations of commercial goods.

The third barrier to the action of editors of scientific journals, and the most serious without doubt, is the variety of functions imposed to them in the performance of their daily activities. Moreover, they frequently lack the background needed to execute the functions mentioned herein, especially concerning the professionals attached to scientific societies and professional associations. Additionally, as analyzed above, most academic editors perform different activities and face the competition from commercial publishers with staff adequately trained to deal with management issues.

Another difficulty is the bad quality of a large number of originals submitted. Just a few manuscripts are accepted without changes that are more or less substantial. According to Garcia and Targino (1999) and Teixeira (2003), this is due to the author's weak background as a reader or editor during his school years, in addition to various factors, such as the lack of dedication and sensibility when building a text that requires systematic reviews. For Kunsch

(2004, p. 40, our translation), some questions can not be avoided in face of defective texts: “Are not the authors serious? Do they lack capacity to write? Do they know what they intend to say? If so, are they aware of the fact that they do not know how to express it?

7 Final considerations

At last, this article describes the dilemmas experienced by the editor of electronic and printed journals, and considers the electronic journal a powerful ally in the scientific communication process. In spite of requiring improvements, it holds clear advantages and questionable disadvantages. A positive aspect – and maybe the most surprising of them after the “wave of fear” related to the disclosure of scientific works on the web – is that, in addition to scientists in general, academicians themselves are more open to the potentialities of the virtual space. A considerably recent research by Carol Tenopir, dated from 2005 that discusses the use of electronic publications in American universities, concluded that there was an increase in the number of technical scientific texts read due to the expansion of the internet. Some two thirds of the material read by American scientists comes from electronic sources, even though there are distinctions among the areas of knowledge, just as it happens in other situations. The author verified that, in astronomy, this percentage reaches 80%, in opposition to researchers from the health segment, who are still strongly attached to printed journals.

Thus, as it does not comes out of nowhere, the journal in electronic format should not be regarded as a cure for all problems related to printed materials, even because, as any other technology, it does not subsist isolated from the social and economic context in which it is inserted. It is a more supplementary than competitive solution, and associates some features of conventional scientific journals to the typology of articles and almost all editors’ functions. This statement is against radical positions which consider the printed form totally outdated.

In addition, as reinforced by Meadows (1999), there are niches to be taken by the electronic options. For instance, emerging specialities which count on just a

few scientists do always face difficulties in the publishing process of printed periodicals. With the aid of electronic means, they can call on volunteers for a systematical disclosure of their findings and, thus, highly specialized publications are able to guarantee continuous and systematic audience and helpmates.

On the other hand, from a wider perspective of this text, which is to discuss the multiple functions of an editor as an essential character in the scientific communication, it is evident that electronic options lack editors. At last, we should remind that the complexity inherent to the functions of an editor can not be exhausted neither in this paper nor in any other. There are controversial issues that may have various correct answers, as they underlay ethical values, worldview and level of awareness. Finally, here is the everlasting dilemma: between "beans and dreams," in other words, between the guarantee of survival and the quest for pleasure in the triumphs and failures in editorial practice.

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