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Review

A reference for science communication

Marina Ramalho e Silva

S. Hornig Priest (ed.), Enciclopedia of Sicence and Technology Communitaction, Sage Publications Inc. (2010)

ABSTRACT: The Encyclopedia of Science and Technology Communication has approximately 300 entries on science communication and is capable of meeting the needs of readers of differing profiles. The entries cover eighteen categories, including controversial science topics and tendencies of media coverage; panoramas of science communication in different regions or continents; legal and ethical aspects; important science players; history, philosophy and sociology of science; theories and research on science communication, and many other topics. By concentrating different information about a field of research and of practical multidisciplinary actions in only one source, the publication serves as a reference for beginners in the area as well as for those who are more experienced in the area. Although conceptualized to serve as quick introductions to the concepts and practices of science communication, the entries are contextualized and each item is explored from various angles in simple language.

When one first enters a field of research or interest, it takes time to become familiar with the terms and concepts that permeate the area. Exploring and unraveling the ins and outs of this field can be a difficult task, mainly when the subject in question is multidisciplinary. This means that aspiring individuals will have to move beyond the borders of this field in search of references dispersed among the most diverse areas, thus filling up their desks with books and articles from the most varied disciplines. The search can be even more torturous when it deals with a field that is new or in formation, as is the case of science communication. But those who have recently inquired into this area have gained a breath of fresh air. A publication was released last year that serves as a reference, not only for beginners but also for professionals who have consolidated experience in science communication: *Encyclopedia of Science and Technology Communication*, published in the United States by Sage Publications and edited by Susanna Hornig Priest, professor of journalism and media studies at the University of Nevada.

The objective of the publication, according to its editor, is to offer the most information possible about the field of science and technology communication in only one source. It is a starting point for the reader, who will find indications of other sources for in-depth research in addition to the nearly 300 entries. Each reading indication is commented on at the end of the encyclopedia where there is also information on courses and academic programs in science communication in different countries, mainly the United States. Another positive aspect of the encyclopedia is that it takes different reader profiles into account. The publication is organized in eighteen categories, which include associations and publications (mainly North American and European) related to the topic; controversial science topics and the tendencies of media coverage; important science communication players; panoramas of science communication in different regions or continents; legal and ethical aspects; history, philosophy, and sociology of science; theories and research on science communication, among others.

In addition, the encyclopedia also serves as a practical guide by dealing with strategies and tools of science communication, as well as with formats and platforms used in order to communicate science, ranging from the most conventional, such as newspapers and television, to others which are more daring, such as theater and circus. The encyclopedia can therefore awaken the interest of a diverse gamut of readers: undergraduate students in different fields, journalists and others who work in communication, professionals linked to activities for communicating science, and scientists. For readers from any of these profiles, the introductory text of the publication is worth having a look at; it unravels certain facets of the field and allows the individual to have an idea of just how interdisciplinary science communication is and what some of the dilemmas and challenges of the field are.

Although the publication was conceived to serve as a quick introduction to the concepts and practices of science communication, the entries are contextualized and each item is explored through more than one angle. The entry "Agricultural biotechnology", for example, deals not only with the scientific concept behind genetically modified foods, but it also deals with how public opinion views these foods – including the difference of perception and attitudes that exists between North American and European citizens. It also deals with regulatory aspects and public policy and with the global adoption of this technology, in addition to environmental, economic, moral, and ethical aspects and food safety. For a journalist who arrives unsuspectingly at the offices of a means of communication to discover that he or she has been assigned to cover the liberation of planting a genetically modified seed, for example, the reading of the entry certainly would be of extreme value for a quick contextualization in simple and accessible language. Perhaps this is not the standard scenario in communication businesses in developed countries, where chances are greater of having specific desks with specialized journalists for subjects related to science, but it is certainly the reality of many newspaper, TV, and radio companies in developing countries.

Another interesting entry is "Online Media and the Sciences". In addition to describing what this media is, its history and its potentials, the entry points out how these technological innovations have had an impact on the way of doing science. One of the most evident consequences is the possibility of collaboration between physically distant laboratories. They maintain remote contact, thus making it possible for them to share equipment and data as well as to exchange beneficial information for their studies. Another consequence is the movement in favor of free access to scientific journals with a peer-review evaluation system, which has obligated scientific publications to review their business models. Because of the ease of publication, through blogs for example, online medias have also had a repercussion on the science communication carried out by scientists for broader audiences, thus encouraging researchers to communicate their work. Those who take the initiative to communicate science will also find information and useful tips in entries such as "Metaphors in science communication", "Narrative in science communication", "Effective graphics", "Scientist-Journalist Relations", "Scientist-Journalist Conflicts", among many others.

For those who are more interested in the history of science communication and the conformation of the field and its main concepts, there are key entries such as "Science literacy", "Deficit model", "Public understanding of science", "Public Engagement" and "Science, Technology and Society Studies", among others. In addition to the historical perspective, these entries question some of the field's presuppositions and approaches. The entries show, for example, that although the concept of deficit model is highly criticized, from time to time concerns surface about society's low level of scientific knowledge in certain countries, as expressed in negative results in national surveys about scientific literacy, perception and public understanding of science. Although the rhetoric of rulers and science communicators has changed in recent years, giving more value to the notions of debate and dialogue between the public and the scientific community and seeing this as a two-way path, the idea of deficit still persists behind the scenes of the many recent initiatives in public involvement in science.

This review could continue to comment on different entries, given the richness of angles dealt with by the publication. However, as we are dealing with an encyclopedia, its reading will hardly be exhaustive. Thus, it is more productive to state only one reservation: the publication was originally conceived to meet the demand for information of the North American public, although in the list of about 240 professionals that contributed with the elaboration of entries there are names from different countries, including a few Latin Americans and professionals from other developing countries. For this reason, it is possible that readers of other nationalities feel that certain topics which are closer to their specific realities are not covered. Although the project has grown and, in the end, reached a greater universe than that of the United States – as informed by Susanna Hornig Priest in e-mail exchanges – it is necessary for readers from other countries to take this aspect into consideration and seek to reflect on the entries from their own realities as well. After all, it should be remembered that the encyclopedia, in spite of being quite broad, can be the first contact of the reader with a series of topics that should be dealt with in more detail with complementary reading in order to be better understood. Before such a dispersed discipline, the publication helps to give identity to the field of science and technology communication; however, it is evident that more subtle nuances will depend on the universe and the interpretation of each reader.

Translated by Robert C. Garner

Author

Marina Ramalho e Silva is specialized in scientific journalism and is currently doing doctoral work in Education, Administration and Communication in Biosciences at the Biochemical Medical Institute of the Federal University of Rio de Janeiro (Brazil). She holds a master's degree in agency journalism from King Juan Carlos University (Spain) and currently works in the Centre for Studies on Science Communication of the Museum of Life/Oswald Cruz House/Oswaldo Cruz Foundation (Brazil) carrying out practical and research activities. E-mail: marina.ramalho@gmail.com.

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