

There is nothing new under the sun

Reviewed Book

MORCILLO, J. M. AND ROBERTSON-VON TROTHA, C. Y. (2021).
GENEALOGY OF POPULAR SCIENCE: FROM ANCIENT ECPHRASIS TO VIRTUAL
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Reviewed by

Erik Stengler

Abstract

A novel and original take on the history of popular science showcases that making science accessible to the public has been part of scientific activity since ancient times. Under this lens, and through twenty-one case studies, current trends such as sci-art and virtual technology can be seen as part of a continuum that was already present in the use of aesthetic and rhetorical tools by the ancient Greeks. Thanks to a careful curation of the collection of texts, this volume as a whole offers more than the sum of its parts (chapters).

Keywords

History of public communication of science; Popularization of science and technology; Professionalism, professional development and training in science communication

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Several signs have emerged in recent times showing that science communication is coming of age as an activity worth studying in itself from various different perspectives beyond those of current issues in Science and Technology Studies (STS) or communication theory. Not long ago, Leßmöllmann, Dascal, and Gloning [2019; reviewed in Stengler, 2020] edited a volume with a thorough multidisciplinary analysis of science communication, with chapters on many disciplines, such as philosophy, psychology or linguistics, to name but a few. Even specific areas within science communication are becoming objects of such interdisciplinary studies themselves, such as science museums and their history [Schirmacher, 2021], “celebrity scientists” [Fahy, 2015], or even a specific media phenomenon like Carl Sagan’s *Cosmos* [Schroeder Sorensen, 2017; reviewed in Stengler, 2017]. Now, Muñoz-Morcillo and Robertson-von Trotha bring us an original look at the history of science communication, deliberately labeled under the generic term “popular science” in order to cover not only the recent history of the systematic and intentional activity normally understood as science

communication or public engagement with science, but also much earlier, more sporadic, even random, actions or events that also brought science to the public in serendipitous ways and that are, in fact, precursors of the current landscape of organized and recognized efforts to this effect.

The book includes two introductory chapters authored by volume editor Jesús Muñoz-Morcillo (*The origins of popular science as a rhetorical and protreptical practice*) and Oliver Hochadel (*From rational recreation to fun with science. Continuities in the history of science popularization since the Enlightenment*). These chapters set the scene and are essential to understand the following case studies, which are organized in three sections covering, respectively, seven case studies from Antiquity (*On the trail of popular science in Antiquity*), five case studies from the following period up to the Enlightenment (*Between pre-modernity and the age of Enlightenment*), and nine more cases from modern times (*Modern times: arts and sciences and media*).

While it may not be necessary for the reader to delve into the painstaking level of detail with which the authors of the book chapters write with their historian peers in mind, many of them have made the effort of linking back their findings to the overarching theme of the book. So, for example, we can learn that already Aristotle had to deal with ethical concerns when talking about scientific issues to the public or with the problem that persuasive rhetoric can also be used to disseminate unscientific ideas, just as happens now through the uncontrolled internet (chapter 5); or that Hero of Alexandria faced already in the 1st century AD the need to use “hooks” to relate complex, unfamiliar ideas to what was familiar to his readership in order to help them “visualize” what is invisible to the eye (chapter 10). We can learn from the interplay between text and images in early encyclopedias to understand and work with the current demand of visual stimuli in internet based communication and social media (chapter 11), and realize that resistance from philosophical and religious traditions to changes in scientific models and paradigms was not restricted to the major conflicts we all learned about, such as Galileo’s and Darwin’s, but were also present in less known scientific topics, like comets (chapter 12). We also can discover that some science communication in the 19th century was not only a “deficit-model” content dissemination but already had behaviour change in mind (chapter 17). Finally, recent and current developments in the relationship between science communication, the visual arts and the explosive irruption of digital technologies in our lives are explored as a continuation of previous historical trends (chapters 19, 20 and 22).

The epilogue by Muñoz-Morcillo that wraps up the book in direct continuity with his introductory chapter demonstrates that as editor of this volume he is more than a reviewer of individual chapters of a collection — he has acted as a careful curator of texts that together construct and convey his overarching idea that, despite our perception of science communication as a relatively recent bolt-on to an otherwise public-shy research mindset, the need to make science palatable to the public has been present since ancient times. There has since been a continuity in the practice of popular science throughout the ages and what has changed are only the means by which it is achieved. Where ancient Greeks and Romans used rhetorical approaches, we now find web videos, science slams or virtual reality, but the phenomenon is essentially the same. Even the recourse to art is not new: the Greek and Roman art of making science appealing through aesthetics and rhetoric is a

direct precursor of current trends in Sci-Art and modern communication strategies, the book argues.

I can see how this book can become an essential text in any academic programme whose aim is to provide a scholarly underpinning on science communication to graduates who wish or need to go beyond a strictly practice-oriented training, while at the same time there is much to learn from this book that can inform a much needed research- and evidence-based practice in science communication and adjacent activities, such as its evaluation or its embedding across academic disciplines as part and parcel of science. As with any historical analysis, learning about the past can serve the purpose of not repeating forgotten mistakes, not to reinvent the wheel, or not waste time doing what has been tried before with little success. In my case, for example, the book will serve as a perfect context setting companion to a course I recently created at the Cooperstown Graduate Program on the *History of science and science museums*, bridging the gap between the topics in history of science and the discussion of science museums (or their precursors) in different historical periods.

The book ends with a note in the epilogue that this volume is just the beginning: with the many questions that the research showcased in this book has raised there is plenty of work for a fascinating new approach to research science communication in historical terms, and to “keep exploring continuities, disruptions and transformations of popular science over large periods of time and across different regions and cultures”. This will lead, according to the vision of Muñoz-Morcillo, to the realization that “we, postmodern people that we are, are not as special as we think. Every society has the popular science it deserves”. I cannot agree more with the implication that a good dose of humility is a very timely contribution to modern times in science communication as well as in any other realm of life.

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Erik Stengler teaches the courses in the Science Museum Studies Track at the Cooperstown Graduate Program, situating science museums, science centers and planetariums in the wider context of science communication. Stengler is committed

to the idea that science museums need to incorporate a new generation of museum professionals with a solid grounding in museum studies to ensure that these institutions remain relevant to society in the 21st century. Stengler has extensive experience in science museum education, programming, exhibition design and outreach, having led several large publicly funded projects to take museum activities to underserved communities, including remote islands, prisons, senior citizens and hospitals; or unexpected places, like beaches, music festivals, fun fairs and village squares. Stengler developed a practice-based research interest in Science Museums and also in science in popular culture, most specifically in TV and film. In both areas Stengler has published various articles, book chapters and edited conference proceeding volumes, often in close collaboration with students whom he likes to encourage to present at conferences and meetings.

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