

Laurence Talairach-Vielmas ed., *Science in the Nursery: The Popularisation of Science in Britain and France, 1761-1901*. Newcastle upon Tyne: Cambridge Scholars Publishing, 2011. 315 pp. ISBN: 978-1-4438-2680-8

By Isabel Zilhão \*

*Science in the nursery* is a collection of thirteen essays addressing the way in which science was popularized in books for children in England and France, from late eighteenth to the beginning of the twentieth century. Some of these essays were presented at the conference “The popularization of Natural History in Britain and France in the nineteenth century”, organized by Laurence Talairach-Vielmas at the Toulouse Natural History Museum, in 2009.

As James Secord emphasises in the first article, “children’s books deserve an important place in the history of science” because, when “carefully interpreted, they provide invaluable indicators of the changing social, religious, and moral values carried by scientific knowledge in different circumstances” (p. 35). In fact, most of the authors generally recognize that, while educative and entertaining, science popularization books for children were used as a moralizing vehicle for instilling obedience and reverence to authority and to reconcile Christianity with science and the natural world. For example, Alain Rauch discusses how the reverence that the young naturalist experienced in observing nature served both the need to humbly respect authority and to reinforce God as the mighty producer of such wonders. The trained eye necessary to understand and guide vision and observation, the by-product of a growing body of knowledge, was narrowed to seeing the works of God and was thus appropriated by theology. By the same token, the essay by Laurence Talairach-Vielmas shows the urge to explain evolution and the struggle for life within the boundaries of Christian morality.

Many of the authors discuss the way popularization texts were used to support social hierarchy and racism. For example, Nicola Gould shows how diagrams and pictures were used for displaying evolution in accordance with social constructions of the time and Fanny Robles shows how Verne explored the late-Victorian fabricated idea of the missing link between humans of higher and lower races in order to question the very nature of the human race.

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Another recurrent feature of these essays is the recognition that popularisers of science appropriated literary techniques used in children's stories, in particular fairy tales, for building their narratives. Fairy tales could be paralleled to the fantastic world of science because the imagination used in such stories was the same needed to understand natural history. Moreover, fairy tales helped opening up children's minds and prepare them to understand and absorb the highly abstract and imaginative concepts often found in science, like metamorphosis and space-time dimensions that can be found in some late nineteenth-century authors (essay by Françoise Besson). Poetry and miniaturization are other discursive techniques employed by popularisers and addressed in the essays of Hugues Marchal and Muriel Louapre, respectively. But popularization of science, we learn, was also used for practical purposes as, for instance, in successfully changing children's attitude towards animals (essay by Frederick Hamilton), or in conveying the idea that scientific knowledge was necessary for a young man to reach manhood (essay by Helen Reddick).

Surprisingly, Maelle Levacher focus on how the name of Buffon was used as a decoy to sell books while his ideas were not being dealt with at all and Collete Lelay shows that in two hundred years only a small amount of books were written with the specific aim of popularising astronomy for young children in France.

While an invaluable interdisciplinary approach (History of Science, French and English literature, Sociology and Cultural studies), this book is a much in need reflection upon the way science was popularized in England and France. By combining papers from both countries, the collection is a first step to build up a comparative approach. Although the question of locality is not deeply explored, Richard Somerset's essay is an attempt to sketch resemblances and differences between the two countries. Somerset compares the way fantasy was used by Arabella Buckley as a literary technique for popularizing evolution while was regarded as something to be avoided by the anti-evolutionist Louis Figuier. Imagination, however, if used correctly, was a valuable resource for both. Actually, differences between the two countries become much more apparent in the way researchers from both sides of the Channel address the topic of popularization. Papers from English-speaking researchers deal predominantly with a narrow group of books and their authors and in the way they specifically popularize science. On the other hand, essays by French researchers are mainly focused on one theme encompassing several books and in drawing generalizations.

This book is an excellent starter for opening doors and building bridges. Are the patterns of popularization unravelled in these essays also present in other countries? Are scientific topics more up-to-date in school manuals or in science popularization books? Besides books, what other instances for popularization of science for children existed during the period under consideration? How often were newspapers used to popularize science for children? What topics were addressed in newspapers? Besides the obvious differences, how differently was science addressed and popularized in books for children and adults? Do they address the same scientific topics? Do they follow the same literary trends? As an audience, how do children react to science popularization books? What do we know about children's reception of such books? In public libraries, what are the preferred scientific topics and literary styles in science popularization books borrowed by children? Popularization of science for children is indeed a topic worth debating in the historiography of science popularization.