



Science & theatre: communication, concepts, contexts, and cases

Reviewed Book

WEITKAMP, E. AND ALMEIDA, C. (2022).
SCIENCE & THEATRE: COMMUNICATING SCIENCE AND TECHNOLOGY WITH
PERFORMING ARTS.
BINGLY, U.K.: EMERALD PUBLISHING

Reviewed by

Kristian H. Nielsen

Abstract

With its attention to empirical detail and theoretical analysis, the book is an important contribution to the field of science-and-theatre studies. The reader will not only gain insight into the many ways in which science and theatre have been combined, but also become familiar with best practices and interesting cases. The book depicts science-and-theatre as a diverse and vibrant field. Framed as a study in communicating science and technology with the performing arts, the book will serve as a source of inspiration for science communicators and science communication researchers.

Keywords

Science and technology, art and literature

DOI

<https://doi.org/10.22323/2.22010703>

Submitted: 6th January 2023

Accepted: 19th January 2023

Published: 13th February 2023

Recently, I went to the theatre to see Michael Frayn's award-winning *Copenhagen* in a production by the Royal Danish Theatre. The play was staged in honor of the centennial of Niels Bohr's Nobel Prize in 1922. Based loosely on a 1941 meeting between the physicists Niels Bohr and Werner Heisenberg, *Copenhagen* is an intense performance dealing with politics, physics, ethics, history, epistemology, and love. It incorporates into its storyline ideas of physics such as the three-body problem, Heisenberg's uncertainty principle, and Bohr's philosophy of complementarity. Although not intended to be science communication as such, *Copenhagen* has inspired other productions focusing on science themes, scientists' lives, or science-society relations. In their introduction to their book on science and theatre, Emma Weitkamp and Carla Almeida mentions that the staging of *Copenhagen* encouraged the Brazilian company Núcleo Arte Ciência no Palco (Art Science on Stage Nucleus) to produce many other plays on science.

The book explores many ways in which science and theatre have been combined beyond fine arts performances such as *Copenhagen*. Emphasis is placed on theatrical productions and performances aimed at communicating science. The first half of the book, written by Weitkamp and Almeida, provides a review of the science-theatre literature as seen through a science communication lens and communicates the results of an international survey on science and theatre. Rather than trying to find common ground Weitkamp and Almeida embraces the diversity of the field. They include plays with educational, critical, and participatory aims. They discuss plays performed in theatres, museums, schools, and public venues. And they identify two gaps in the literature, namely the nature of collaborations between artists and scientists and the meanings created by audiences. Chapter 7 is dedicated to the current state of audience reception research in general and the few attempts made to gauge audience responses to science-theatre.

In late 2020, Weitkamp and Almeida conducted an international survey on science and theatre. The survey was widely promoted in the science communication community and received 108 valid responses from five continents. Chapters 3–6 report on the results of the survey. Data show that science-theatre performances happen occasionally at the institutions where the respondents work, with some institutional support and most often as a single event or a small number of bespoke activities funded by private philanthropic organizations such as the Alfred P. Sloan Foundation in the United States or the Wellcome Trust in the United Kingdom, to name the two most prominent ones. The productions involve many different actors: artists (actors, directors, playwrights), specialists (scientists, science historians, health professionals), and science communicators. They are primarily motivated by what the authors call fundamental aims, such as the wish to arouse interest in science, raise awareness of important social issues involving science, or humanize science and scientists. Pragmatic concerns, primarily pedagogy and education, personal interest and institutional goals also play a role for some respondents.

The survey confirmed that science-theatre tends to focus on the natural sciences, in particular the physical sciences, although many respondents also reported an interest in complex and interdisciplinary themes. From the point of view of science communication, the authors suggest that science-theatre is an open field where it may be unproductive to use disciplinary boundaries as a tool of classification. The field is innovative with many different formats and novel ways of interacting with the audience in use. In addition, the survey data show that science-theatre performances take place in many different venues from tradition theatres to museums, summer camps, and zoos, which means that they attract diverse audiences. The authors conclude that the “wide variety of places in which science-theatre is performed and the fact that increasingly occupies public places, in which citizens circulate naturally in their daily lives, could lead to an expansion and diversification of the audience reached by the more traditional means of science communication” [p. 66].

The book is a hybrid between a monograph and an edited volume. The second half of the book, aptly titled Act II, consists of eight case studies and a conclusion. The eight papers were solicited after the survey, and they represent eight different countries. Together, the case studies underscore the diversity and the dynamic nature of science and theatre. In two cases, the SMASHfestUK and the Brazilian

Ciência em Cena (Science on Stage), the organizers used science-theatre to connect science to communities that are traditionally excluded from science and science communication activities. Two other case studies, presenting the work of the Portuguese Marionet theatre company and the Augmented Lectures originally developed for the Teatro della Meraviglia Festival in Trento in 2017, discuss what happens when scientists take center stage. The final six cases all explore new venues and formats for science-theatre such as the storytelling techniques used in the Walking Tall workshop developed by the Palaeontological Scientific Trust in South Africa and the theatrical performance *Cosmic Underground* by the Polish Instytut B61 that takes places on a Trans-European railway journey.

The book portrays science and theatre as a diverse and exciting field. For those who mostly connect science and theatre with celebrated plays such as Bertolt Brecht's *Life of Galileo* (1943), Tom Stoppard's *Arcadia* (1993) or Michael Frayn's *Copenhagen* (1998), the book will serve as an eye-opener. With its attention to empirical data and conceptual analysis, the book supplements other science-and-theatre monographs such as Kirsten Shepherd-Barr's [2006] *Science on Stage: From Doctor Faustus to Copenhagen*, Eva-Sabine Zehelein's [2009] *Science: Dramatic. Science Plays in America and Great Britain, 1990–2007*, and Florence Fix' [2018] *Théâtre et Science*, all of which are treated in Weitkamp and Almeida's review chapter. Framed from the perspective of science communication, the book should be able to inspire the community of researchers and practitioners in public communication of science and technology to contemplate and make use of theatrical performances in their future work.

References

- Fix, F. (2018). *Théâtre et science*. Paris, France: Editions Orizons.
- Shepherd-Barr, K. (2006). *Science on stage: from Doctor Faustus to Copenhagen*. Princeton, NJ, U.S.A.: Princeton University Press. Retrieved from <https://www.jstor.org/stable/j.ctv2tvzq2>
- Zehelein, E.-S. (2009). *Science: Dramatic. Science plays in America and Great Britain, 1990–2007*. Heidelberg, Germany: Universitätsverlag Winter.

Author

Kristian H. Nielsen is associate professor in science history and science communication at the Centre for Science Studies, Aarhus University, Denmark. His current research focuses on citizen science, science communication in organizational contexts, and trust/mistrust in scientific expertise.

 khn@css.au.dk

How to cite

Nielsen, K. H. (2023). 'Science & theatre: communication, concepts, contexts, and cases'. *JCOM* 22 (01), R03. <https://doi.org/10.22323/2.22010703>.



© The Author(s). This article is licensed under the terms of the Creative Commons Attribution — NonCommercial — NoDerivatives 4.0 License. ISSN 1824-2049. Published by SISSA Medialab. jcom.sissa.it