

## CIRCUS, SCIENCE AND TECHNOLOGY: DRAMATISING INNOVATION, LONDON: PALGRAVE MACMILLAN CHAM, 2020. 189 P. ANNA-SOPHIE JÜRGENS.

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Pitting perfectly within the scope of this journal, Circus, Science and Technology: Dramatising Innovation provides a rich and inspiring overview of the interplay between circus and technological developments in a variety of contexts. Circus scholar Anna-Sophie Jürgens, the editor of the volume, has done a great job collecting these specialistic and thought-provoking contributions from a variety of disciplinary backgrounds. This publication is the result of a conference entitled "Imagineers in Circus and Science: Scientific Knowledge and Creative Imagination," which was held at the Humanities Research Centre (HRC) at the Australian National University in April 2018. An interesting yet challenging feature of the conference and resulting volume is that they deal with both the history of circus as well as more contemporary practices and even futuristic speculations.

Given that "the interplay and relationship between technological inventions, engineering endeavours and circus arts" (2) have not yet received much scholarly attention, this volume aims to illustrate the cultural productions resulting from technological developments in the circus context—or, in Jürgens's own words, "The bottom line is, this book clarifies circus matters" (10). When one understands technology as culture, the engineering and implementation of new techniques are seen as key aspects of circus performances. Referring to the title of the conference, Jürgens explains the central concept of an *imagineer* as someone who uses a "highly imaginative concept of technology" (4) situated between "engineering" and "imagining." In other words, the roles of engineering and

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technology within performances are emphasized by considering inventors, showpeople and performers as "imagineers."

The first part of the book, "Engineered to Promote Awe: Circus (and) Bodies," deals with the bodily realities of popular entertainment acts. For example, Jane Goodall's chapter describes the development of P. T. Barnum's famous nineteenth-century circus. Among other things, it successfully illustrates the great interest in and market for topics related to human evolution, which makes it a valuable addition to other studies on these themes in Victorian culture (for example, James A. Secord's 2003 book Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation). Goodall leaves the reader with some questions—mostly intentionally—that further add to the wonderful speculative world of Barnum's Greatest Show on Earth. In the third chapter, the focus is shifted from circus owners to the performers themselves. Katie Lavers and Jon Burtt tell the fascinating story of Erin Ball, a Canadian circus artist who lost both her legs and is now re-imagining her body to perform new and experimental aerial acts. Although this chapter is the least historical of the contributions, it deals most explicitly with Jürgens's proposed terminology (i.e., re-imagineering of the body). Strikingly, Ball states that after her performances, many people ask themselves, "What did I just see?" (49), which resembles the "What is it?" concept P. T. Barnum used for his human exhibitions roughly 150 years earlier.

In the second part, "Technological Invention: Engineering (on) the Circus Stage," the emphasis is placed on the development and adaptation of technological innovations in the realm of popular entertainment. Mark St. Leon describes the rise of Australian circuses from the 1850s and the difficulties they faced. Finding an example—but also competition—in big American travelling circuses, Australian entrepreneurs had to imagineer (both imagine and construct) their own position and relevance. Legitimacy, novelty and transportation were the key topics these entrepreneurs had to concern themselves with. In a very interesting article on the development of circus in Australia, Gillian Arrighi draws important connections between the discovery of electricity and the evolution of the modern circus. Similarly, the building of railway networks was essential for the practices of touring entertainment enterprises. Peta Tait investigates the emotional effects of new technologies in spectacle shows, from safety nets in aerial performances to macabre theatre techniques to kangaroos bouncing on a trampoline. She illustrates that different acts are carefully constructed to instil either fear, surprise or wonder in their audiences with the help of new technologies, and that these emotions are (sometimes) heightened with animal performances.

The last three contributions make up the third part, "Techno-Imaginaries: Imagineering Circus in Other Media." Martyn Jolly and Elisa deCourcy explain how the magic lantern and circus were linked in their similar function to "amplify

and transform space" with the help of technology, turning everyday "dull material" into magical illusions (127). Ruth Richards discusses how early animation and the circus are both intended to amaze audiences and evoke emotions of wonder, but differ in how they either show or conceal the mechanisms behind the tricks (155). The final chapter, written by Anna-Sophie Jürgens and Robert C. Williamson, adds the study of fictional narratives to the relationship between circus and technology; it discusses how technology is often envisioned as an instrument for turning magical or supernatural power into stage spectacles.

The images in some of the chapters really enrich the reading experience. Since the book deals with such fascinating research subjects, it would have been wonderful to see even more visual materials and sources as illustrations for the discussed case studies; but of course, researchers must make feasible, realistic, financial and ethical decisions about what can (or cannot) be published. Luckily, a quick Google search will get you somewhere very quickly. And while you are browsing, some basic understanding of Australia's history and culture is recommended, as many (but not all) of the chapters explicitly deal with "Australianness" - from colonialist railway expansion to the kangaroo as national emblem and identity-often in relation to European and American (colonial) influences. Circus, Science and Technology hereby provides a refreshing addition to the dominant perspectives in the Anglo-Saxon (and Western European) literature.

While some authors really engage with the editor's proposed concepts (e.g., imagineering), other chapters are more loosely tied to the overall project or tend to end quite abruptly. In general, the connections between some of the chapters could be stressed more explicitly, but the volume's compilation style partially links them together. An example of this can be found in the chapters on the magic lantern and animation (chapters seven and eight, respectively). Placing these two chapters next to each other allows the reader to find cross-references between the two contributions, namely circus as a motif in both magic lantern slides and early animation. However, such interlinkage is missing between other chapters. To fully appreciate the intertextual interferences and cross-connections of the overall project, it is recommended to read the volume in its entirety.

That said, each chapter counts as a unique and compelling contribution on its own. The invited authors' writings are of great interest and quality, and the volume incorporates each text into a kaleidoscope of appealing studies on the interplay of circus, technology and performance. The volume's biggest strength is, in my opinion, the merging of all these different contributions into a fruitful overview of a rich research topic that demands further investigation. All in all, Circus, Science and Technology: Dramatising Innovation can be considered a starting point for future researchers (like myself) seeking to investigate the roles of science and technology within the world of itinerant entertainment.

## Reference

Secord, James A. Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation. University of Chicago Press, 2003.

## **Author Biography**

**Tim Overkempe** is a PhD researcher at the University of Antwerp. He is involved in the EU-funded project Science at the Fair: Performing Knowledge and Technology in Western Europe, 1850–1914 (www.scifair.eu). In his doctoral research project, he investigates the roles of technology and science at the nineteenth-century fair, focusing specifically on the introduction of new media instruments at the fairground (e.g., early visual media, X-ray technology, mechanical theatres) and how they contributed to the popularization and spectacularization of science. He also holds a History and Philosophy of Science degree from Utrecht University.