



Alexander Hall. *Evolution on British Television and Radio: Transmissions and Transmutations.* Basingstoke: Palgrave Macmillan, 2021. 296 pp. \$119.99, cloth, ISBN 978-3-030-83042-7.

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Published on H-Sci-Med-Tech (April, 2022)

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Long on Hall, *Evolution on British Television and Radio: Transmissions and Transmutations*

As the BBC gears up to celebrate the centenary of its initial formation in 1922, some may find it surprising that the broadcaster's efforts in science communication have not received more scholarly attention to date. For the US context, the work of Marcel C. LaFollette offers an overview of science broadcasting in radio and television, but a similar unifying narrative is lacking for the British case. Tim Boon's *Films of Fact* (2008) dealt in part with BBC Television broadcasts, and more recently Jean-Baptiste Gouyon's *BBC Wildlife Documentaries in the Age of Attenborough* (2019) established a postwar genealogy for the wildlife genre. Allan Jones, Ralph Desmarais, and Helen Piel, meanwhile, have shown how negotiations between BBC producers and public scientists led to the emergence of a formal science policy at the corporation. This work, some of it still unpublished, provides a solid institutional history of science broadcasting in Britain. But as research on the BBC's history has begun to show—including most recently David Hendy's *The BBC: A People's History* (2022)—the institutional is just one of several approaches that can help us to understand the history of British broadcasting.

Alexander Hall's *Evolution on British Television and Radio: Transmissions and Transmutations* (2022) is an important intervention that will help to advance our understanding of science broadcasting in Britain. The book shows how broadcasters presented ideas about evolution in radio and television in the twentieth century. Hall adopts a broad timeline, concentrating principally on the period between the 1920s and the late 1980s, although technically the book extends until 2009. The focus on evolution serves a double function: sometimes narrowing down and sometimes expanding the scope of material covered. Narrowing down, because Hall situates the book directly in conversation with the well-established historiography on the history of evolution as an idea, as exemplified in the work of Bernard Lightman or Peter Bowler; expanding, because Hall occasionally chooses to focus on a range of programs that might escape the attention of scholars focusing more firmly on "scientific" broadcasts. This quality not only helps to underline one of the principal arguments of the book—that evolution permeated broadcasting in ways that stretch far beyond the obvious—but it also speaks to the work's broad appeal, which will attract scholars interested in sci-

ence communication, the cultural history of evolution, and media history, to name just a few.

In chapter 1, the introduction, Hall lays out the book's main arguments. His aim is to show how "producers conceived, constructed and communicated content on evolutionary themes" (p. 15), and throughout the text this emphasis on the production process is generously backed up with evidence from the BBC's Written Archives Centre in Caversham. Drawing on the *Radio Times* listings, Hall has made a useful graph illustrating the number of programs that mention evolution in their title between 1925 and 2009, which shows a considerable uptick after the Second World War as the BBC's overall programming grew exponentially. What did these broadcasts have in common, aside from their content? One answer, Hall posits, is that during this period broadcasts on evolution began to develop a common theme with shared "normative framings, narrative structures and visual devices" (p. 15). Borrowing a term coined by E. O. Wilson in 1974, he argues that many of these programs fit into the broader history of the "evolutionary epic" (p. 4): broad-sweeping grand narratives of the story of evolution that first rose to prominence in the late nineteenth century, and which are "now the unquestioned norm" in science television (p. 269). Hall's focus on broadcast content, instead of the BBC's internal politics and structures, helps him to identify these long-running themes. However, as he is careful to point out, the rise of the broadcast evolutionary epic was by no means inevitable, and in seven subsequent chapters he uses an impressive range of sources to lay out how producers adapted evolutionary ideas for broadcasting in an array of different and often competing formats, styles, and interpretative frameworks.

Chapter 2 explores the earliest appearances of evolution on the radio, beginning with a 1925 broadcast by Julian Huxley entitled *The Stream of Life*. Huxley ensured that evolution's maiden voyage on the airwaves was steeped in his own ideas

about the biological sciences, which he would articulate under the umbrella term "modern synthesis." Huxley's scientific humanism was favored in scientific broadcasts precisely at a time when the BBC's religion department was censoring humanist and other non-Christian worldviews. Subsequent broadcasts in the BBC's first two decades largely followed the example set by Huxley, something that was facilitated by the work of early BBC producers like Mary Adams, who was sympathetic to this evolutionary narrative and its use in popularizing biological topics.

In chapter 3, Hall focuses on broadcasting in the years immediately after 1945. This period saw an increasing diversity of approaches to discussing evolution on radio. Hall contrasts early broadcasts by Jacob Bronowski, who continued Huxley's earlier emphasis on scientific humanism, with a series of talks entitled *Science and the Christian Man* (1951), which took an "accommodationist" approach by trying to reconcile Christianity with evolutionary theory. Throughout this period, a small but vocal minority of Christian fundamentalists wrote to the BBC to complain at any mention of evolution on the radio, and in 1952 the producer Archibald Clow was asked to write the corporation's only detailed policy document about evolution, which Hall calls a "masterclass in clear science communication" (p. 60). The chapter ends with a discussion of *Five Hundred Million Years* (1958), the BBC's first-ever television series about evolution, which Hall argues shared much in common both with the radio programs that preceded it, and with the larger-scale documentary series that became the norm from the 1970s. One characteristic that would become increasingly important was the close collaboration between specialist producers like Mary Adams and public-facing scientists like Peter Medawar, Jacob Bronowski, and Julian Huxley. Together, Hall argues, they would influence "the actual structure and format of emergent science broadcasting genres" (p. 79).

Chapter 4 represents a slight break with the overall chronology of the book, tracing how evolutionary themes were treated in educational broadcasting. From the Schools radio broadcast series *How Things Began* (1941-68) to the BBC's collaborations with the Open University, which began in 1971, evolution was often discussed in a formal educational setting for both child and adult listeners. Unlike the productions explored so far in the book, Hall argues that educational broadcasts were characterized by a "diversity of approaches" (p. 84). Teaching the principles of biology often superseded the imposition of a more generalized narrative with evolution at its core. This chapter is especially valuable in opening up wider discussions about the BBC's school broadcasts on radio and television. For instance, Hall shows how the experimental techniques often associated with Rhoda Power's history broadcasts, which dramatized the events of the past, reverberated into other subjects as well as into the BBC's main programming.

Chapter 5 focuses on another body of source material that some scholars might have overlooked: drama and science fiction. The choice of drama as focal point is significant because of the BBC Drama Department's association with modernist experimentations with the radio form during the 1930s, which saw well-known writers like George Orwell and H. G. Wells producing plays with significant evolutionary themes. In Orwell's case, this took the form of an episode from the series *Voyagers of Discovery* in 1946, which dramatized Charles Darwin's journey on the *Beagle*. This introduces an important and recurrent theme in the book: how broadcasts about evolution frequently discussed the topic in the context of science history, a theme which Hall returns to in chapter 8. The second half of the chapter, on science fiction, focuses on the television series *Doctor Who* (1963-) and *Doomwatch* (1970-72). These, Hall argues, "often presented the most stereotypical framing of evolution" (p. 159).

In chapter 6, Hall turns to a type of television filmmaking that he calls the "humanist blockbuster." This, he explains, consisted of "a television format that was capable of presenting a critical, but ultimately unswerving narrative of scientific progress" (p. 168). This format won out over other approaches to representing evolution on the small screen, such as Nigel Calder's *The Life Game* (1973), which placed the focus on the latest developments in biological research. One of the earliest examples of the humanist blockbuster was Jacob Bronowski's *The Ascent of Man* (1973), a series in thirteen parts that told the history of humanity within the framework of an "evolutionary epic." *Ascent* was a high-budget production, bringing together a wide range of experts including BBC producers, science journalists, scientists, and public institutions. Many of the people involved in this project would go on to produce further humanist blockbusters, including David Attenborough and Aubrey Singer, who later collaborated in producing *Life on Earth* (1979).

Chapter 7 assesses the role of television in raising the public profile of competing interpretations of evolution, such as Alister Hardy's aquatic ape theory and scientific creationism. While many scientists argued that giving airtime to pseudoscientific theories like Hardy's was irresponsible, Hall argues that in many cases it opened an opportunity to introduce "a wider audience to the processes of science" (p. 236). In contrast, the BBC's coverage of creationist ideas in the 1980s, mostly emanating from the United States, "acted as a potential conduit for these ideas, briefly giving a platform to extremely marginal religious groups and their anti-evolutionist ideas" (p. 236). This was because creationist ideas were often introduced very superficially, only to be rapidly dismissed: they were used as a compelling and controversial way to interest audiences in scientific ideas. In this latter respect they largely succeeded, but as a way of deconstructing creationist ideas they were largely ineffective.

The book's final chapter, chapter 8, serves as something of a coda by comparing the Darwin anniversaries of 1959 and 2009 within broadcasting history. In the former, celebrations took place over two years, starting in 1958 to commemorate the centenary of Charles Darwin's and Alfred Russel Wallace's papers being read at the Linnean Society of London. Broadcasts focused largely on demonstrating how Darwin's ideas had contributed to the development of a "modern synthesis" in the biological sciences, as well as highlighting evolution's Britishness. The 2009 celebrations, in contrast, concentrated solely on Darwin, and the amount of content produced was much larger and more varied. This comparison permits Hall to take stock of the major themes in broadcast evolution that he has laid out over the previous chapters: celebrity presenters were now fully established as authoritative voices on the subject, divergent or fringe accounts of evolution were largely absent, and most broadcasts emphasized Darwin's unique role within the history of science. Interestingly, Hall notes that the "humanist blockbuster" did not feature prominently in the 2009 anniversary celebrations, although his explanation of the significance of this could have been clearer. Readers may be left wondering whether some of the recent changes to the humanist blockbuster that Hall describes—including a growing skepticism about the validity of "grand visions of man's evolutionary future" (p. 268)—are a variation on a long-running theme, or instead represent a more substantial departure from the norm.

At the end of chapter 5, Hall addresses a thorny issue that many media scholars will recognize: how can we know the impact that all this broadcasting about evolution had on its audiences? Hall explains the issue as follows: "While the direct effects of consuming any one piece of media are almost impossible to discern, when we begin to consider an individual's media consumption as an often self-selecting, cumulative process, this ramshackle collection of chat shows, fiction

and dramas that feature across the corpus take on an increased importance" (p. 159).

This is a problem which is not just limited to broadcast media, but indeed to any cultural history that explores a large corpus and tries to assess its impact on the public. Hall's book refers at different points to audience research by the BBC, which was formally instituted in 1936, but naturally the questions that interested the BBC's researchers do not always align with those of the historian. Another way to access audience reception might have been to use oral histories, although this likely would have proven useful only for singularly successful programs. Hall also comments at various points on the interdependence of different media formats, including the way that popular personalities often repeated the same content "via multiple popular mediums" including print, radio, film and TV (p. 228). His discussions of these different formats, and of the "cumulative process" of audiences learning about evolution across different contexts will no doubt interest a broad range of scholars who are interested in the mass reception of scientific ideas.

Overall, this is a fascinating cultural and intellectual history of how a single scientific idea was communicated in British broadcast media over the course of the twentieth century, one which will stimulate further research on the history of science communication and will be indispensable for undergraduate reading lists on the topic. Perhaps of greatest interest to readers in this network will be Hall's observation that ideas like Huxley's version of the modern synthesis "cannot easily be separated from the media he used to popularise it" (p. 4), building on earlier work in the history of popular science that has shown the deep embeddedness of media in shaping scientific knowledge.

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Citation: Max Long. Review of Hall, Alexander. *Evolution on British Television and Radio: Transmissions and Transmutations*. H-Sci-Med-Tech, H-Net Reviews. April, 2022.

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