Sofia Bull, *Television and the Genetic Imaginary*, Palgrave Macmillan: London, 2019, pp. XII, 239: ISBN: 978-1-137-54846-7, £109.99 (hbk), ISBN 978-1-137-54847-4, £109.50 (EPUB).

Reviewed by Amy C. Chambers, *Manchester Metropolitan University*, UK

'The DNA molecule looms large across numerous genres, programmes, and images' (p. 1) becoming shorthand for more than just a narrative specific to molecular biology but science as a whole. Even without fully understanding its scientific complexities, publics "read" this image as shorthand for "science"; renderings of DNA strands often appear in the opening credits of TV shows such as *CSI: Vegas*, and the science segments of news channels with both fiction and non-fiction programmes using the image to communicate the seriousness and centrality of their science content. Scientists and science communicators work hard to inform, and inspire but, despite their best efforts, many people get their science from the popular media they consume. Misunderstanding and misinterpretation of science can quickly become repeated and thus embedded into the cultural scientific imaginary and publics' understanding of science.

Recent works on small screen science communication, including this book and Alexander Hall's excellent *Evolution on British Television and Radio* (2021) – notably both published by Palgrave's Studies in Science and Popular Culture series – show the important and often overlooked role that broadcast (and increasingly streaming) media plays in the translation and popularisation of scientific ideas and practices. Although written for a specialist audience in terms of knowledge of molecular biology, *Television and the Genetic Imaginary* is comprehensive and clearly argued. Bull utilises Raymond Williams' 'structures

of feeling' concept as a method for 'capturing television's gradual articulation and negotiation of a new set of cultural ideas about DNA' (p. 11). Each chapter is densely written but clearly structured with an extensive list of the shows referenced in a bibliography that acts as a helpful record of the breadth of TV material produced to date that engages with the genetic imaginary.

Bull's book gives a strong overview of the medium of television as a cultural forum that not only informs publics about molecular biology but also constructs its own narratives across production, dissemination, and reception. Bull's specific focus here is on genetics and popular narratives from the early 21st century and she incorporates a surprisingly broad range of television texts from US reality television behemoth, *Keeping Up with the Kardashians* (2007-21), to British primetime ancestry documentary *Who Do You Think You Are?* (2004-) and cult Canadian science fiction *Orphan Black* (2013-7).

The book is split into two key themes: complexity and kinship. The first two chapters consider the visualisation of the complexity of genetics in the post-genomic era through increasingly complex narrative forms. Chapter one, 'Microscopic CGI: Imaging Molecular Worlds', explores the idea of the 'genetic imaginary' predominately presented in documentaries that have used computer-generated imagery (CGI) to make the invisible (unknowable) visible (knowable), thus providing simple but also spectacular 'insight into the genetic building blocks of life' (p. 44). Stories that are told about genetics are then caught in 'multiple and often opposing discourses' ironically complicated by the apparently simple visualisation of microscopic cells (p. 65). Chapter two, 'Complex Seriality: Genetic Science as Narrative Device', looks at how this complexity is utilised in long-form fictional television shows such as *House M.D.* (2004-12) and fringe-science fiction show *Fringe* (2008-13). Necessary science understanding is built episode by episode, yet these shows also aim to

disrupt expected/accepted knowledge about what DNA does and can tell us, and often in ways that push at the edges of believability and accuracy.

Kinship and specifically genealogy and reproduction are the focus of the second half of the book, again split into two chapters. Chapter three, 'Genealogical Intimacy: Materialising Genetic Kinship', analyses long-running popular family history programmes in UK and US contexts. These shows create physical and emotional narrative journeys that connect present-day people with their genetic ancestors through re-enactment, travel, family trees, and DNA testing that directly connects genetics and kinship. Bull argues that this approach has the potential to cause some viewers to question 'whether genetic kinship bonds are really as effortlessly substantial and significant' as these shows suggest and thus may unintentionally disrupt 'their [own] general adherence to essentialist genetics' (p. 19). Chapter 4, 'TV Families: Normalising Assisted Reproduction', explores fiction and non-fiction narratives about fertility and childbirth and the 'cultural process' that has led to assisted reproductive technologies (ART) becoming 'both more familiar and "curiouser"' (p. 161). Here, Bull compares narrative approaches to the issues surrounding genetic kinship especially concerning the construction of 'the single mother by choice' (p. 163); the attempted normalisation of surrogate heterosexual pregnancies in documentaries and reality TV; and sitcom representation of LGBTQI+ parenthood and chosen families (represented by almost exclusively white gay men).

The epilogue weaves together many of the key themes of the book through discussion of *Orphan Black* as a complex narrative text that is focussed on kinship, genealogy and reproduction. Bull considers the role of the clone as 'a popular symbol for advances in genetic engineering . . . that can be used to both assert and undermine essentialist views about genetic identity' (p. 209). The sestra, as Ukrainian clone Helena (Tatiana Maslany) labels *Orphan Black*'s 'drastically post-genomic clones' (p. 211), are not indistinguishable copies

but distinct characters that show the 'queer potential for redefining kinship' that more complex narratives and nuanced understandings of molecular biology allow for (p. 210).

Bull astutely remarks that 'television shares a project of *constant* reinvention with genetic science' (p. 212, original emphasis), and it is this plasticity and longevity of some televisual media that allows for evolution of ideas and understanding between seasons and series. The flexibility and potential responsiveness of the television medium is a key reason for its importance as an analytical space for Bull and a growing number of scholars of science and popular culture. *Television and the Genetic Imaginary* will be useful for science humanities scholars and students interested in understanding the importance and breadth of television's influence over the public understanding of genetics and science more broadly and makes a valuable contribution to the growing scholarship at the intersection of science and entertainment media.

References

CSI: Vegas (2021-) CBS. Jerry Bruckheimer Television, Trace Pictures, CBS Studios.

Fringe (2008-2013) Fox., Bad Robot Productions, Warner Bros. Television.

Hall A (2021) *Evolution on British Television and Radio*. London: Palgrave Macmillan.

House M.D. (2004-2012) Fox. Heel and Toe Films, Shore Z Productions, Bad Hat Harry Productions, Universal Television.

Keeping Up with the Kardashians (2007-2021) E!. Ryan Seacrest Productions, Bunim/Murray Productions.

Orphan Black (2013-2017) Space and BBC America. Temple Street Productions, BBC America, Bell Media.

Who Do You Think You Are? (2004-) BBC Two (2004-2006) and BBC One (2006-). Wall to Wall.

Biographical statement

Amy C. Chambers is a Senior Lecturer in Film and Media Studies in the Department of English at Manchester Metropolitan University. Her research examines intersections of entertainment media and the public understanding of science. Recent publications explore medical history and horror in *The Exorcist* (1973); women's scientific expertise in mass media; socio-technoscientific imaginaries and SF literature; and women-directed horror and SF cinema. amy.c.chambers@mmu.ac.uk