BOOK REVIEW/COMPTE RENDU

Joan Haran, Jenny Kitzinger, Maureen McNeil, and **Kate O'Riordan**, *Human Cloning in the Media: From Science Fiction to Science Practice*. New York: Routledge, 2007, 256 pp. \$US 150.00 hardcover (978-0-415-42236-9)

have been waiting a long time for a book such as this that proposes to marry technoscience and culture. In this case, it brings the media's treatment of human cloning to a technoscientific analysis of the science and science fiction of human cloning. For the most part it is a reliable text — the research is well grounded and well supported. It consciously occupies an emerging space of analysis between technoscience, feminist and mainstream studies of science and technology, and communication/media studies that challenges fast-held distinctions between science fiction and science as fact. It could have benefited more from critical studies of film (especially feminist ones) and literary criticism where the worrying over distinctions between fact and fiction has long been resolved in astute and political analyses of literary and visual imaginations. It is divided into six substantive chapters which, despite an obvious and plodding effort to link between chapters, remain distinct stylistically and, more importantly, in their relative success in getting points across. The strongest chapters are those that make detailed analysis of the media treatment of cloning (both science as "fact" and as "fiction"). Chapter 4 pulls revealing personality caricatures from the compelling and very public cases of false claims of human cloning in Korea and the US and applies important technoscience concepts of witnessing to the role of the media. Chapter 6 argues how truth claims are produced through the media, including the scientific media and the process of peer review, to make the point that "science has been made and is being made in the media" (p. 124). Chapter 7 contextualizes the whole study in recent media handling of science, especially in the UK, with some limited comparisons to the US. Results from focus groups and the UK Mass Observation Archive are used to make the point that public responses to human cloning are mixed — for example, UK Catholics feel more marginalized in their resistant position than US Christians, and some individuals are capable of oppositional readings of the media. I would have placed these two chapters much earlier to first lay out the main point of the text, and then to provide the terrain of media and human cloning before the more challenging analyses outlined below.

Chapter 2 explores the multiple meanings of human cloning and makes the important distinction between therapeutic and reproductive cloning in humans. As with the other chapters where the arguments are either harder to follow or less convincing than those above, there is a tendency to confuse terms. In this chapter, a set of genealogy studies for cloning is promised, but it would disappoint Foucauldian scholars as it instead offers a decent linguistic and rhetorical reading of key terms used in the history of cloning from "Dolly" (the famously cloned sheep) to the present day. The following chapter on cloning futures brings in the science fiction material, along with some popular media visuals (a Korean stamp celebrating human cloning, for example). Closer readings following filmic theory and methods would have helped a great deal here. Instead we are left with frustratingly superficial links such as between Arnold Schwarzenegger the actor in a film featuring cloning and Arnold Schwarzenegger the American politician who supports therapeutic cloning. Applications of rich concepts such as a "globally located national subject" are treated too quickly, with little support. Chapter 5 significantly shows how women's bodies play peek-a-boo in the mediation of good versus bad human cloning, and are used to reinforce social norms such as heterosexuality and passive, maternal femininity. Also the authors make the important point that the new reproductive technologies centered on IVF must be linked to the technoscience tracing of human cloning, unfortunately, however, without benefit of a good deal of feminist research in the 1980s that traced IVF developments and pointed to the objectification and disappearance of women as reproduction elided into replication. Finally, in a chapter that has "futures" in the title, I was hoping for something on the mediation of capital's interest in human cloning, but there is nothing!

Methodology is an important component of the text as a great deal and a great diversity of information is brought together, including popular media (newspaper and television news, films and TV shows), focus groups, individual interviews, the UK Mass Observation Archive, scientific literature, technoscience literature, and media literature. The various methods and data sources are clearly laid out in the introduction and include textual analysis of the news media data gathered within a comprehensive time-limited sampling from 2000 to 2006; genealogy studies (I would call it linguistic studies and content analysis) of both the fictional and nonfictional renderings of genetics that also generated a filmography; interviews of key individuals (such as Ian Wilmot); conference participation (scientific and science fiction); and an analysis of

global trajectories, chiefly the Korean announcement of the first ever successful cloning (through somatic cell nuclear transfer, SCNT) of a human embryo and a US "maverick" human cloner. The strongest arguments emerge from the traditional media analyses (see above). Where more postmodern analyses are promised, interesting points are made but rarely is the case strong or the analysis sustained. Also concepts such as agency and subjectivity, typically fluid in postmodern analysis, remain quite fixed here. Yet, the overall argument of the text, that indeed media does matter to science, is well made.

This text serves those well versed in technoscience and science and technology studies who are interested in the role of the media as well as those well versed in visual and cultural studies interested in the compelling case of genetic science in contemporary culture. The text is based on a wide range of well-documented fieldwork and is a good start to the analysis in this cross-disciplinary area of media and technoscience.

QUEEN'S UNIVERSITY

ANNETTE BURFOOT

A professor of Sociology at Queen's University since 1989, Annette Burfoot's current research includes a technoscience study of modern medical imaging (wax anatomical models), visual communications in cancer care, and sociotechnology in early 20th century Italy. She has published on gender and science (reproductive and genetic engineering), science fabulation, and the visual culture of medical science. Her most recent publication is "From La Bambola to Lake Ontario to a Toronto Striptease: The Public Display of Anatomical Materials," Cheryl Walsh (ed.) *Gender, Health and Popular Culture* (Wilfred Laurier University Press, forthcoming); and "The Fetal Voyager: Women in Modern Medical Visual Discourse." burfoota@queensu.ca