

BOOK REVIEW/COMPTE RENDU

Kelly A. Joyce, *Magnetic Appeal: MRI and the Myth of Transparency*. Ithaca, NY: Cornell University Press, 2008, 208 pp. \$US 21.95 paper (978-0-8014-7456-9), \$US 59.95 hardcover (978-0-8014-4489-0)

In her concluding chapter Kelly Joyce claims that *Magnetic Appeal* “moves academic analysis of medical imaging technologies into new sociocultural areas [to show] how these realms shape and are shaped by each other” (p. 154) To some degree the text does this, but perhaps not in the way the author had hoped. My feeling on many occasions while reading through the incredibly rich, detailed, and fascinating information on the development and dissemination of MRI technology was that Kelly Joyce promised more than she delivered.

The book examines MRI technology in the US from its early incarnations as nuclear magnetic resonance (NMR) in the 1970s to its full blown and expanding application in medical practice today. The evidence comes from multiple sources: interviews with four scientists key to MRI development, content analysis of popular culture on MRI, fieldwork at three imaging centres and five MRI conferences, an unspecified number of interviews with medical professionals affiliated with the research sites and a literature review of science and technology studies. The wealth of highly varied findings, (including qualitative and quantitative information) are reported in six chapters. Three chapters advance a theoretical argument (“MRI as Cultural Icon,” “Seeing is Believing: The Transformation of MRI Examinations into Authoritative Knowledge” and “A Sacred Technology? Theorizing Visual Knowledge”); the others are more descriptive (“Painting by Numbers: The Development of Magnetic Resonance Imaging and the Visual Turn in Medicine,” “The Image Factory: Work Practices in MRI Units” and “The Political Economy of Magnetic Resonance Imaging”).

Theoretically and methodologically, the study is clearly situated in the literature on the human shaping of technology and the social construction of science. The approach is updated with reference to Donna Haraway’s recent work in posthumanism and to those working in medical imaging, such as Adele Clarke. Various analytical approaches engaged or assumed include Marxism, Actor Network Theory (ANT) and Foucault’s biopower. There is no single, sustained critical analysis and the approaches touched upon are far from fully activated, with state-

ments such as: “Technologists and radiologists find multiple ways to resist the mechanization of their work,” (p. 93) presented as engaging with Foucault’s theory of power and resistance. Joyce also uses “discourse” to mean vocabulary. One of the most significant analytical approaches involves the role of visual culture. The object of study obviously lends itself to such and there is a valiant attempt to bring together science studies (the visual turn and authorization of sight in science) with a critical approach to visual culture. The latter would have been strengthened enormously by the considerable work in semiotics (structural and post-structural) and film theory so that the last sentence could have revealed much more than: “The promise of visibility is, perhaps, not as remarkable as it had been made to appear” (p. 165).

It is fascinating to read how the MRI technology moved from pure science in physics and chemistry, to a visual one, largely due to the lobbying efforts of the highly organized profession of radiologists. Equally compelling is the story of how psychology and psychiatry are now adopting MRI in visualizing mental pathology. Markets for the technology open like spring crocuses under the warming sun: in 2005, 10% of the American population had been examined by MRI compared to 3.5% a decade earlier (p. 111). We also learn how MRIs are now used like DNA in medical litigation, shifting the margin of proof into a new area of visibility. The data in this book is impressive, and could be used in further analyses to engage more effectively with biopower, medical visual discursivity, and the political economy of medical imaging. Combining the close examination of the MRI as the flagship of medical imaging with analyses of larger social, economic, and cultural spheres could reveal the myth of medical authority in the Barthesian sense. In sum, this text is torn between engaging a wide readership through a fascinating social history of MRI, and advancing existing theories of visual discursivity and medical science studies for a smaller, academic readership. By far it is more successful at the former than the latter.

Queen’s University

Annette Burfoot

Annette Burfoot is educated in fine art, and sociotechnical systems (York University, Canada) and science policy (University of Sussex, UK). A professor at Queen’s University since 1989, her current research includes a technoscience study of modern medical imaging (wax anatomical models), visual communications in cancer care, and socio-technology in early 20th century Italy. Burfoot edited *The Encyclopedia of Reproductive Technologies* (Westview, 1999); co-edited with Susan Lord *Killing Women: The Visual Culture of Gender and Violence* (Wilfred Laurier UP, 2006); and has published on gender and science (reproductive and genetic engineering), science fabulation, and the visual culture of medical science.

burfoota@queensu.ca