

HALLAM STEVENS, **Biotechnology and Society: An Introduction**. Chicago: The University of Chicago Press, 2016. Pp. 397. ISBN 978-0-226-04601-3. £21.00/\$30.00 (paperback). doi:10.1017/S0007087418000195

Many books have been written to date about biotechnology. The origins of biotechnology go back many millennia with the brewing of beer and the making of bread, but in more recent times the advances in biotechnology have been remarkable and rapid. *Biotechnology and Society* largely avoids the early history and indeed most of the detailed history, science and technology of biotechnology. Instead Stevens has addressed the very broad spectrum of biotechnologies that include genetic engineering, genetically modified foods, genetic testing, stem cells, drugs, designer bodies, cloning, eugenics, the abortion pill and designer babies. More importantly, Stevens has then considered each of the biotechnologies in what he defines as a 'sociotechnical system' in which several elements – political, social, moral, ethical, legal and economic – form a complex and interwoven web that raises some important issues for society as a whole. It is important to point out that the sociotechnical system is viewed almost exclusively through the prism of the United States, though a few references are made to regulations in other countries.

Biotechnology and Society is divided into twelve parts, each with two chapters. Each chapter has a standard structure that includes an introduction, an outline of the topic (usually with a short historical summary) and its potential, a review of the current position of the technique's application, how the sociotechnical elements have been addressed to date, and what issues may arise in the future. Each chapter has a concluding summary and reading list; the excellent reading lists provide plenty of scope for more in-depth exploration. As an example, Chapter 17, on stem cells, begins with a section outlining the work by the German biologist August Weismann (1834–1914) with his germ plasm theory, the discovery of stem cells by Ernest McCulloch and James Till at the Ontario Cancer Institute in the 1960s, and James Thomson's production of the human embryonic stem cell line in 1998. The next section describes in some detail what stem cells are and their properties. The final section surveys the political storm arising from IVF procedures and the future use of stem cells in the United States, where abortion is such a hotly contested issue for citizens, government, Congress and the Supreme Court. With science advancing at a rapid pace, the contentious question remains, to what extent should stem cells be used as therapies against many debilitating diseases?

While in the main concentrating on current practices, Stevens has also taken the opportunity to look into the immediate and longer-term future (where this is possible in such a rapidly developing field) to identify some of the questions which the sociotechnical system poses and with which society will have to continue to engage if the acceptable boundaries for the application of biotechnologies are to be clearly defined. Several techniques such as gene therapy and stem cells are already raising serious questions, but as these techniques advance, additional (and likely more difficult) questions will arise and the boundaries may need to be kept under regular review. The recent approval by the US Food and Drug Administration of the first gene therapy treatment marks an important stage. Nevertheless, there remains the issue of regulation across the different biotechnologies and enforcement coordination. Unfortunately, Stevens does not develop regulation very far and avoids any mention of perhaps the more serious question: whether regulation should be left to individual countries or undertaken through worldwide agreements involving the United Nations or the World Health Organisation. With negotiations likely to be complex and protracted, *Biotechnology and Society* provided a good opportunity to map out a starting framework.

At various stages in the narrative Stevens rightly raises concerns over the role of major business corporations in biotechnology. The role of biotechnology companies in the development of drugs has been appreciated for some time, but corporations are increasingly involved in the other components of biotechnology as defined in this book. While collection and storage of personal data have been aided in the last thirty years by the Internet, there is now the possible collection of

additional and more sensitive data – the genetic profile of every human being. It is not just the collection of such data but more how the information might be used and to whom it might be sold. This raises other strands requiring urgent regulation.

Stevens has drawn not only on his knowledge of the biotechnologies and the sociotechnical issues, but also on his practical experience presenting courses in Melbourne, Harvard and Singapore. The book is aimed at those following a studies in science course in biotechnology or those who might be considering organizing such a course, and *Biotechnology and Society* is thoroughly recommended as a practical handbook for those organizing such courses. However, it is very likely that many of the issues raised in this book will affect to a greater or lesser extent the lives of everyone who reads this journal (if they have not done so already) and therefore the book is recommended to all readers of *BJHS*. It will also act as a useful guide when issues relating to these biotechnologies are debated in the public domain.

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ANDREAS-HOLGER MAEHLE, **Contesting Medical Confidentiality: Origins of the Debate in the United States, Britain, and Germany**. Chicago and London: The University of Chicago Press, 2016. Pp. 165. ISBN 978-0-226-40482-0. \$40.00 (cloth). doi:10.1017/S0007087418000201

Effective patient care is today contingent on an enshrined principle of confidentiality. Without it, patients' trust would be eroded and they would be reluctant to seek treatment from within the medical establishment, especially for conditions that carry social or moral stigma. They might instead self-medicate or seek out quacks, thereby creating public-health risks. As Andreas-Holger Maehle demonstrates, maintaining confidentiality was therefore vital for preserving individual and collective health.

But the ideas of privacy and confidentiality that now underpin doctor–patient relationships were still novel at the beginning of the twentieth century. How, then, have they become so integral? In *Contesting Medical Confidentiality*, Maehle compares the development in Germany, Britain and the United States of unique principles of medical confidentiality. Charting the transitions between different national and time-specific principles, he offers us important glimpses into the philosophical and political underpinnings of medical practice between the 1890s and 1920s. Such principles were the product not only of national legislative traditions, but also of distinct medical cultures and communities.

Although the study of medical confidentiality is not new, Maehle's comparative focus moves beyond a single national context. Instead, he offers up an important new transnational perspective on health policies, the medical professionals who implemented those policies and the often fraught relationships between medical professionals, their patients and the state. He does this through three cases studies: medical privilege in court, the notification of venereal diseases and the reporting of criminal abortions. In each, the principle of confidentiality was placed under considerable strain. We can see how the protection of individual patients through medical confidentiality conflicted with the protection of communal health through the encroachment of the state. This tension regularly manifested itself in medico-legal debates over court privilege – many doctors were reluctant to testify in divorce cases where one spouse had infected the other with venereal disease, or criminal cases against women suspected of terminating their pregnancies.

Throughout the book, Maehle touches on broader philosophical principles underpinning state governance and individual liberty, but his primary focus is the different legal frameworks and medico-legal power relations that shaped medical privilege. Decisions to overrule this privilege were made in the name of society's collective interests and according to each government's understanding of its role in preserving population health. However, the paradoxical result was, in some cases, the