

it would certainly be a shame if the study were neglected as having a value in relation to the Welsh context alone. Indeed, anyone wanting a clear story of how the British way in lunacy changed over the course of two centuries and what this could mean for a single institution would not be being misdirected if they ended up, as they should from now on, in remote North Wales.

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Maxime Schwartz, *How the cows turned mad*, transl. Edward Schneider, Berkeley and London, University of California Press, 2003, pp. viii, 238, £17.95 (hardback 0-520-23531-2).

Billed as a “detective story” that “illuminates the remarkable progression of science”, *How the cows turned mad* is the English translation of a French text by Maxime Schwartz, molecular biologist and former head of the Institut Pasteur, Paris. Schwartz goes beyond existing histories of Bovine Spongiform Encephalopathy (BSE or “mad cow disease”) to consider the growth of knowledge about related diseases, which since the 1960s have been grouped together under the heading Transmissible Spongiform Encephalopathies (TSEs). These include scrapie in sheep, Creutzfeldt Jacob Disease (CJD) in man, and kuru, a disease of cannibalistic Papua New Guinea tribesmen.

To Schwartz, TSEs are “the disease”, and BSE, CJD, kuru and scrapie are the different “guises” that it has adopted in a bid to escape scientific detection. Starting in the eighteenth century, he moves effortlessly over time and space, tracing its diverse clinical and pathological manifestations. He describes how late nineteenth- and twentieth-century advances in bacteriology, genetics, biochemistry and molecular biology enabled European and American scientists to make important discoveries that contributed to the understanding of disease aetiology, pathology and epidemiology. He also recounts how, in recent

years, the consumption of BSE-infected meat and the use of contaminated human growth hormone preparations has given rise to CJD in young adults, and asks whether, in the light of concurrent scientific knowledge, such tragedies could have been avoided.

The English translation of this text is brought up to date with a new chapter, which describes the events and discoveries of the year 2001. In conclusion, the author identifies several impediments to the growth of knowledge about “the disease”: its elusive behaviour; the existence of disciplinary and professional barriers which meant that scientists were often unaware of relevant work undertaken in another field; and the fact that scientists’ findings, in suggesting that an infectious protein (prion) caused “the disease”, ran counter to accepted scientific thought.

Written for a lay audience in the year 2000, when BSE and CJD were subject to widespread media attention, Schwartz’s aims were two-fold: to educate readers, so enabling them “rationally [to] assess the often alarmist information” that came their way, and to celebrate the successes of modern science. It is impossible to assess whether he has managed to dispel fears about BSE and CJD, but in his second goal he has largely succeeded. This is a concise and extremely readable account, which provides a good overview of the growth of knowledge about TSEs and renders accessible some extremely complex scientific information. As such, it is a good starting point for anyone wishing to learn more about the nature of these unusual diseases, although the bibliography is limited, and the reader may find irritating Schwartz’s portrayal of “the disease” as a sentient being that has repeatedly tried to evade capture.

Historians, however, will find this work rather less useful. The author’s retrospective narrative runs counter to mainstream academic history of medicine, as does his celebration of scientific heroes and their discoveries, and his imposition of a present-day disease category upon the past. In confining his attention to the science of “the disease”, Schwartz mentions but does not address the controversies that

surrounded it and so neglects its immense political, economic and cultural significance. There is also much scope for deepening his analysis of how scientific dogma and disciplinary boundaries have influenced not only the growth of scientific knowledge but wider perceptions of and responses to the TSEs. That said, Schwartz's book is a good departure point for future studies, and it is to be hoped that historians will succeed as well as he in popularizing this extremely important subject.

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Susan D Jones, *Valuing animals: veterinarians and their patients in modern America*, Baltimore and London, Johns Hopkins University Press, 2003, pp. xii, 213, illus., £33.50 (hardback 0-8018-7129-8).

The intertwined histories of domesticated animals, human–animal relationships and veterinary medicine represent a very interesting scholarly field; nevertheless, they have received only limited attention from historians. Veterinarians have written the majority of books on the history of veterinary medicine, however; most of them lack proper documentation and analysis in a broader cultural context. Work on the contextual history of veterinary medicine has only recently emerged. Therefore, this study by Susan Jones is very welcome. Based on a wide variety of scientific and popular sources, she has approached the history of veterinary medicine and the veterinary profession in twentieth-century America from the perspective of changing human–animal relationships, particularly the changing economic and emotional value of domesticated animals.

In five thematic chapters, Jones explores a particular group of animals and its role in American society. The chapters deal with crucial junctures at which transformations in animal valuation and the development of the veterinary sciences and the veterinary profession

influenced each other: the transition from horse power to motorized vehicles, public health concerns over animal food products, the rise of factory farming and the emergence of companion animal medicine. The final chapter highlights how veterinarians worked during the twentieth century to reconcile animal exploitation with morality. The book also includes a very useful introduction to sources on veterinary history and human–animal relationships.

In an original and compelling way the author describes how the relationship between Americans and their domestic animals changed dramatically during the last century. Around 1900, almost half of the population lived and worked on farms in close contact with animals. A century later the population was mainly urbanized, horses changed from common working animals into popular hobby animals, while pets changed from luxury animals for the élite into members of the common family. In the same period a comprehensive infrastructure for animal food production and quality control developed. Some important related issues such as antivivisectionism, animal welfare, anthropomorphism, concern over food safety, and the development of veterinary practices in the livestock industry and specialized companion animal medicine are taken into account.

Considerable attention is paid to the role of veterinarians in valuing domestic animals as well as their role in changing human–animal relationships. When working horses were replaced by motor vehicles, veterinarians intensified their activities in making the livestock industry more profitable and created the field of veterinary public health. Later veterinarians paid more attention to the growing number of pets that represented a high sentimental value for their owners, thus creating a “modern pet culture”. According to Jones, veterinarians contributed to and manipulated animal value in order to claim a place as indispensable mediators of human–animal relationships. She argues that veterinarians' contribution to the reconciliation of animal use with concerns about morality “shaped the development” of large-scale