

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

production of animals for food and commercialized pet keeping. “Veterinarians have sought to address Americans’ uncertainty about the ‘proper’ human–animal relationship as the ideological driving force of their profession. They did not pretend to be philosophers, but operated as rationalists meeting social needs” (p. 3).

One could question such an influential and active role for the veterinary profession within social-economic and political processes that determined the value attributed to animals and the development of animal health care. As representatives of a very practical profession, even with a certain aversion to theorizing, most veterinarians operated from an economic rather than an ideological point of view. They simply wanted to make money. One could also argue that veterinarians did not shape Americans’ relation with domestic animals but just took advantage of new business opportunities that resulted from social, economic and political change.

Nevertheless, Susan Jones has written a very interesting book. It suggests the necessity for an international comparison of the historical development of the veterinary profession, before we can evaluate whether indeed this profession constituted a significant directing force in twentieth-century history in general, and in human–animal relationships in particular.

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Paolo Palladino, *Plants, patients and the historian: (re)membering in the age of genetic engineering*, Manchester University Press, 2002, pp. ix, 250, £47.50 (hardback 0-7190-6152-0).

Plants, patients and the historian contains elements of three books in one volume: an insightful, well-documented history of plant breeding research in Britain, 1910–40, a biography of the surgeon and cancer researcher Percy Lockhart Mummery, and an intellectual

memoir tracing the author’s attempts to come to terms with his role as a historian and his relationship to his subject matter. Palladino opens by describing the parallels between the practices of genetics and modern historiography: genes and archives are both repositories of the victors’ spoils in struggles for power and domination, though victory is tempered by conflicting documents and genetic aberrations. Exploring the two together, Palladino promises, will illustrate how the archive is not merely a repository of the past, but also “the principle of formation of the past, the present and the future”(p. 7).

At the beginning of the twentieth century, after William Bateson rediscovered the work of Gregor Mendel, many British botanists believed that Mendelian principles would transform plant breeding into a precise and exact science. At the same time, the rapidly expanding brewing industry, which held considerable political clout, sought improvements in quality control and crop uniformity. Because the development of new crop varieties was an expensive and risky proposition, there was a push for state support of agricultural research, resulting in the creation of three state-supported scientific research centres, including the Plant Breeding Institute at Cambridge University.

However, plant scientists had conflicting views regarding the utility of genetic theory for farming practice. Sir Rowland Biffen, first director of the Plant Breeding Institute, believed genetic principles were essential to developing improved plant varieties, a view supported by the success of his influential Yeoman wheat variety. But others, for example, John Percival of the Department of Agriculture at University College of Reading, insisted that characteristics of interest to farmers, such as yield and strength, were influenced by such a complex array of physiologic and environmental factors that they could not be reduced to Mendelian principles.

Throughout this debate, there was a parallel tension between the aims of the academic scientist and the needs of the farmer. Cambridge plant researchers insisted that in order to be objective, agricultural science must be wholly