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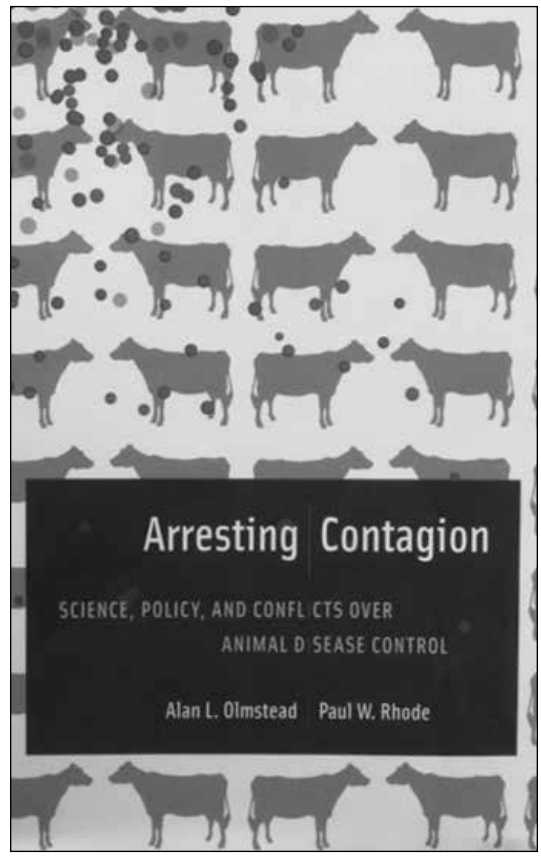
Book Review

Arresting Contagion: Science, Policy, and Conflicts over Animal Disease Control

by Alan L. Olmstead and Paul W. Rhode
2015, Harvard University Press
Cambridge, Massachusetts
465 pages

Review by David D. Vail



An enduring struggle has long ensued among science, public policy, and animal diseases in the United States. Throughout the nineteenth and twentieth centuries, American agriculture included a cultivation process that placed humans into new, simplified relationships with animals, insects, and the land. Disease often became a hidden, but powerful, member of this production ecosystem. Extension science, technological advancements, domestication of animals, and harnessing natural resources all made farms very busy, but vulnerable, places. Although many historians, biologists, pathologists, toxicologists, and agriculturalists have studied the environmental, scientific, economic, and cultural realms of agricultural disease, few have combined these fields in an effort to look beyond professional boundaries to how science, politics, policy, and production intersect.

Economists Alan Olmstead and Paul Rhode argue in *Arresting Contagion* that, from the 1860s through the 1940s, managing livestock meant studying, controlling, and, ultimately, eradicating a host of diseases, both for their threats to agricultural enterprises and public health. As American farmers increased production quotas, their fields and livestock came under new vulnerabilities, and human health was increasingly linked to the health of farms and the food they produced. Transmittable infections, such as anthrax, brucellosis, cholera, Ebola, influenza, mad cow disease, and trichinosis, increased as ranchers drove cattle from Texas to Illinois, ranched their livestock in Kansas, or raised hogs in Ohio. These types of human–wildlife interactions and the diseases that arose from them resulted in a government regulatory structure that invested in scientific experimentation to guard against disease in farmlands, cities, and wilderness. However, agricultural landscapes also helped expand a legacy of federal intervention from above and political suspicion from below.

Arresting Contagion begins by historically tracing this federal effort through the U.S. Bureau of Animal Industry (BAI). With a main goal of improving human health through studying diseases and then eradicating them, the BAI made numerous advances in zoonotics and public policy throughout the late 1800s. As the authors state, the BAI "evolved to overcome great stacks, including ignorance, rampant disease denialism, constitutional impediments, knotty jurisdictional conflicts, and strong grassroots resistance . . . scientific advances interacted with public policy innovations to address serious animal and human health problems."

In subsequent chapters, Olmstead and Rhode study how various agricultural contagions created disease environments as much as they threatened profits. A series of case studies on livestock tells the complicated history of disease science, politics of agricultural health, and the challenge of convincing practitioners that their sick animals actually placed their own communities and families, as well as their pocketbooks, at risk. From bovine tuberculosis to tick fever and hog cholera, the development of disease control and food safety in the United States had much to do with linkages between the simplified landscapes of industrial agriculture and the spread of diseases. New organizations, such as the U. S. Department of Agriculture and the World Health Organization would take over the BAI's early efforts, continuing to shape science, politics, and policies throughout the twentieth century.

Moreover, North America's disease-prone past is part of its disease-protected present. The BAI's attempts to study, protect, and eradicate contagions on the farm helped elevate U.S. disease control efforts, policies, and scientific discoveries to its current status as a global leader in the eradication of communicable diseases. Historical studies of zoonotic exchanges, the politics and policies around disease prevention, or the intertwined roles of local knowledge and scientific experimentation complement recent studies such as that of K. E. Jones et al. (2008).

Arresting Contagion makes clear that diseases in humans have an applicable environmental, agricultural, and political history. Olmstead and Rhode offer a sound investigative model that merges historical sources, scientific studies, economic data, and public health policies that can assist current human–wildlife damage management efforts.

Literature cited

Jones, K. E., N.G. Patel, M. A. Levy, and A. Storeygard et al. Global trends in emerging infectious diseases. Nature:990–993.

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