

nen los mercados es, como sabemos, la del *fracking*, esto es, la profundización de las desigualdades sociales y la expropiación de todo lo que la tecnología de altos insumos energéticos permite hacer.

¿En qué momento de la historia pretendió la economía evadirse de la naturaleza? ¿Aprenderán algún día las sociedades humanas a relacionarse entre sí y con su medio de manera prudente, sin amenazar la base biológica de la vida? ¿Podrían aprender a calcular el ritmo de su propia expansión en relación con los ritmos de expansión y reproducción de los ecosistemas de la biosfera? Lo que las sociedades de la era industrial sí aprendieron es a conectar distintos ecosistemas entre sí y a transferir el desgaste de un lugar del mundo a otro. Sin embargo, ese truco ya es insuficiente. Se necesita hacer algo más que transferir la huella ecológica hacia

afuera, porque en la naturaleza no existe un «afuera». En todas sus variantes, las sociedades humanas son tan naturales como los demás productos de la evolución y participan en los procesos vitales de la biosfera como uno entre muchos. La dinámica energética y su devenir –la evolución– no tienen preferencias por ningún componente de la biosfera en especial. Tampoco tiene la evolución incorporado un piloto automático, es un proceso no lineal y puede suceder cualquier cosa, pero su rumbo depende mucho de que el medio sea benigno, lo que, en nuestro caso, es la biosfera tal como ha funcionado hasta ahora.

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Alan L. Olmstead and Paul W. Rhode

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

Cambridge, Harvard University Press, 2015, 465 pages

In 2016, this book was the winner of the Allan Sharlin Memorial Award of the North American Social Science History Association which is awarded to an outstanding book in social science history. The judges declared that it was *a magisterial work of social science history, Arresting Contagion engages the interdisciplinary methods that the Award memorializes. Olmstead and Rhode rely on several disciplines necessary to their account: economic theory,*

political, social and environmental history, and the medical sciences. These words show that from the outset we are contemplating a masterpiece, an outstanding work for economic history and agricultural history.

Alan Olmstead and Paul Rhode have been pioneer researchers in the study on the introduction of innovations in North American agriculture. The early works of Alan Olmstead analysed its mechanisation, questioning some previous conclusions

drawn by other respected academics such as Paul David. Olmstead and Rhode previous collective work was focused mainly on challenging what some considered as established truths. In the successful theory on induced innovation in agriculture, Hayami and Ruttan had chosen the United States as a perfect example of an agricultural sector with a factor endowment characterised by abundant land and scarce labour. The high price of labour had induced mechanisation in order to save on the most expensive factor. On the other hand, biological innovations had been largely insignificant. However, in an important series of articles culminating in the book *Creating Abundance: Biological Innovation and American Agricultural Development*, Olmstead and Rhode highlighted the extent to which these types of innovations had been highly important and how this made the analysis of the diffusion process of innovations in agriculture in their country much more complex.

This book addresses an issue which, until now, has been given little attention both in the United States, which is the country on which it is focused, and in other countries: the history of government interventions to combat infectious livestock diseases.

In 1884, within the US Department of Agriculture, the Bureau of Animal Industry (BAI) was created, which, over the following decades until 1940, developed a series of campaigns which led to the eradication of the seven principal diseases suffered by the livestock population of that country. This is the main theme of the book. It ex-

plains in great detail, and in more than four hundred pages, how the interaction between scientific progress and innovations in public policies was able to successfully combat significant animal health problems which had serious consequences on human health.

The first chapters analyse the development of veterinary and medical science regarding the spread of diseases and its interaction with public policies. This was a complex task as the division of competencies between the states and the federal government generated serious conflicts between the two administrations. The creation of the BAI was the first major public intervention by the government in the economy. It was followed by others which, until the publication of this book, were proclaimed as being the first of this type.

In the following chapters, the action of the BAI is studied, case by case, disease by disease, including the conflicts and problems that it had to develop its effective policies to eradicate diseases and the successes achieved. If we take into account that the control of these diseases implied the culling of thousands of animals, sometimes across extensive territories, we can understand the difficulties that these actions had to overcome.

Behind the almost 500 pages of the book there is serious and well-guided research which asks relevant questions and answers them successfully. In short, an excellent historical narrative which explains clearly and in detail the development and success of the measures taken to gain control over animal diseases in the United States.

But what makes this book truly important, beyond its enormous value as a historical study of the subject, is that it goes beyond its own theme and addresses others which are even more transcendental, such as federalism, public intervention in the economy, social capital formation and the development of collective action, the impact of scientific advances and the effects generated on human health as a consequence of the successful fight against animal diseases. The in-depth and serious analysis of the political economy of the control of animal diseases and food hygiene is undoubtedly, one of its strongest points.

The book bravely reaches some firm conclusions. First, it claims that the control of animal diseases and food safety and hygiene required a high level of public intervention and a change in competencies from the local and state level to the federal level. The BAI is precisely the federal agency which best represents this shift, due to the important competencies that it received, above those of the states. The cost-benefit analysis developed shows that the new interventionist public policies in this field not only generated high yields but also enormous externalities. In the debate about the nature of public intervention in the control of animal disease and food safety, contrary to the point of view held by the public choice school which is highly critical of it, Olmstead and Rhode conclude that it was essential, as it resolved serious market failures.

The reading of this book also opens the door to new questions. There are two which

I find particularly interesting. First, the question arises of whether the federal jurisdiction over interstate trade, that was one of the principal justifications for the intervention of the federal government, benefited this trade and the functioning of an integrated national market in the United States. The second is related to the role of this country as a food exporter and the impact that these policies had on its trade in livestock products.

My final reflection is concerned with the need to address this subject on a European scale and preferably in a comparative way. The North American case must undoubtedly constitute an essential reference, which will enormously facilitate the beginning of similar research in our continent.

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