

In sum, *Cocoa* is an informative and engaging study that is both complex and deeply reflective of the ways that cocoa and chocolate impact everyone connected with the trade, from farmers, to major manufactures, to consumers, to the author herself. Moreover, given Leissle's expert, yet equally inviting tone, the book has appeal for a wide range of audiences (specialists, scholars, students, industry professionals, and the general public). Finally, given its multi-disciplinary approach, comprehensive content matter, and surprisingly concise format (just over 200 pages in length), this book is ideal for graduate and undergraduate courses, across the social science and humanities, that seek a text to unpack

the relationship between markets, politics, social dynamics and commodity trading.

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Juri Auderset and Peter Moser

Die Agrarfrage in der Industriegesellschaft: Wissenskulturen, Machtverhältnisse und natürliche Ressourcen in der agrarisch-industriellen Wissensgesellschaft (1850-1950)

Köln, Böhlau, 2018, 341 pp.

The *agrarian question*, debated so intensely ever since the late nineteenth century, continues to engage scholars trying to explain how one of the most dramatic societal transformations –the shift from an agricultural to an industrial society– took place across Europe without major political and social unrest. Juri Auderset and Peter Moser's examination of the production of agricultural-industrial knowledge from 1850-1950 fills a gap in our understanding of said process, exemplified by the transformation of peas-

ants into farmers. The authors identify agents, institutions and concepts in the debates over agriculture, and argue that the production of knowledge –not technology or economic emergencies– lay at the root of the revolution in agriculture.

In this densely written and carefully researched study, Moser and Auderset examine the transformation of agrarian societies into industrial states in regard to the production and transfer of knowledge. The study focuses on Switzerland, but the process can be applied with some variation to

other European countries as they developed their industrial economies. The book covers the period from roughly 1850-1950. In the 1850s, discussions first emerged about the *backwardness* of agrarian society and the need for industrialization and modernization. Around the turn of the century, actors and discussants agreed that agriculture followed its own laws and required special protection. By the 1950s, however, the discussion took yet another turn. Spurred by a dramatic increase in productivity, the era of industrialized agriculture posed new environmental and social problems that needed to be addressed. For the history of agricultural-industrial knowledge the late 1950s thus represent a turning point. The authors' periodization is convincing and goes beyond the more familiar markers such as the agrarian crisis in the late 1870s, the accelerated economic transformation after Second World War or the beginning of a new European unified approach to agricultural policy in the late 1950s. With an eye on Switzerland, the study looks at the actors of transformation, at institutions and practices over time. The establishment of schools, rural associations and interest groups in addition to the work of scientists and the agency of local and state players shaped the larger economic transformation, a change that would not have happened without the advances of a knowledge society.

Audersen and Moser divide the history of agrarian-industrial knowledge into four chapters each tracing one major aspect of the transformation: the beginning of book keeping and farm management, the mo-

torization and mechanization of farm labor, advances in plant-breeding and the introduction of new reproductive technologies as it relates to animal breeding. The book's structure follows a chronological understanding of the transformation, since one change led to the other: improved book keeping enabled the modernization of farm labor, which in turn allowed for increased profits and the investment in farm machinery. Discoveries and debates in the field of genetics around the turn of the century led to experimentation in plant research and breakthroughs in animal breeding.

Chapter one focuses on farm management as the introduction of book keeping required and produced statistical data on farm work and production. Accounting provided a new mathematical language to describe agriculture and allowed others to measure, understand and compare farm work in an increasingly urban and industrial society. Numbers (not narratives) now told the story of agricultural production and, as its actors quickly realized, also constructed agrarian realities, forcing actors to adopt a *calculative mentality*. Profit margins instead of the sustenance of the family unit started to define agricultural work, even though both concepts continued to coexist in the rural world throughout the nineteenth century. Moser and Auderset argue briefly yet convincingly that because of the new separation of the home economy from the farm economy, of consumption and production, the role of farm women and their contributions to the family economy became increasingly marginalized in industrial society, a major change in the

traditionally more interwoven and interdependent aspects of rural life and work.

Chapter two focuses on the mechanization and motorization of agricultural production, and the ambivalence that existed between the fascination with the new machinery and challenges of its adaptation to rural and regional realities. Initial optimism about the advantages that would come with improved machinery and human labor replaced by machines made way quickly to the understanding that farm animals were better suited than machines to *motorize* farm labor in stables and fields. Draft horses became indispensable for farm labor and the number of animals used in agriculture continued to increase, their prominence not to be replaced until the mid-twentieth century. The skepticism toward technology and motorized machines is poignantly summarized in a cartoon first published in 1910, where a little mole stands next to a pile of soil with a shovel in its hand lecturing farmers and agricultural entrepreneurs who listen attentively (p. 125). The tractor, another symbol of the technological transformation in agriculture, was not suited for the Swiss fields and did not replace horses and other draft animals until the latter half of the twentieth century.

Chapter three looks at plant breeding and scientific discourses about nutrition, selective breeding and genetics. Here, too, just like with the animals discussed in chapter two, the goal was to transform local varieties of plants according to their industrial functionality. This chapter dives deeply into the work conducted by Swiss geneticists

in the late nineteenth century. Supported by state agencies, they worked in their laboratories to develop new, more resistant and more productive varieties of wheat and other plants. In the context of widespread hunger and scarcity during First World War, plant breeding and the increase in agricultural production became a public affair. International networks of scientific communities in France, Germany, Scandinavia and the United States exchanged knowledge and conducted research. Less clear remains the question of how the advances in plant breeding affected farmers across Switzerland. The frequent use of French quotes makes the reading of this chapter for non-trilingual speakers somewhat slow.

The keeping, feeding and breeding of animals in the context of new scientific research and reproductive technology is the topic of chapter four. Moser and Auderset describe how the new understanding of animal use can be traced in the language about farm animals and their *productive power*. By the end of the nineteenth century, the cow had become associated with milk factory, whose body could be manipulated and improved. For the rural actor, however, other functions of the cow remained equally important until the middle of the twentieth century that could also be improved through breeding: the cow as a source of meat and as muscle for draft labor. The authors describe how by the end of the 1930s, advances made in artificial insemination were ready to be applied on a large scale. By the 1950s, these new technologies had dramatically changed the structure of animal husbandry and farming.

Chapter five deals with the *crisis, the fragmentation and the marginalization of the agricultural-industrial knowledge regime*. By the 1950s, the fundamental transformation of agriculture coupled with a dramatic increase in productivity had cast doubt on the concept of agriculture as distinct from the industrial economy. Agricultural-industrial knowledge had become industrial-agricultural knowledge. At the same time, the change from a multifunctional labor and consumption unit to a scientific and industrial unit left agrarian actors on the margins, and the belief in limitless growth was accompanied by new concerns. In the midst of the third agricultural revolution, industrial and rural actors began to ask themselves what agriculture had become, and what role it would play in the future. Was agriculture a way of life that needed to be protected? Was it a form

of production that required state support? Agricultural knowledge in the 1960s took on a new life of its own, paired with the fear that the ongoing industrialization of agriculture was not sustainable. Questions surfaced about alternative ways to farm and produce. Intervention in agricultural politics by the state was recognized as important because of the cyclical nature, regional variations, and the inner dynamics as well as the devastating environmental and economic effects. Finally, 150 years after the emergence of the *agrarian question*, Auderset and Moser's valuable study has made it clear that the *question* has been answered, but remains as open and subject to debate as ever.

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Manoela Pedroza

Por trás dos senhorios: Senhores e camponeses em disputa por terras, corpos e almas na América portuguesa (1500-1759)

Jundiaí, Paco e Littera, 2020, 312 pp.

Manoela Pedroza se propõe a analisar os senhores e camponeses em disputas por terras, corpos e almas na América portuguesa de 1500 a 1759, e realiza este exercício com maestria, adentrando a colônia na busca de vestígios dos senhores e foreiros. Visa tecer uma história social dos direitos de propriedade ou uma *história social do aforamento de terras* (p. 18). E, neste intento, debate as ações dos padres jesuítas na

invenção do senhorio colonial (p. 9) e o seu caráter rentista, o que, em nosso entender, é a sua maior contribuição por oportunizar o conhecimento da ação jesuítica no campo de discussão do direito de propriedade nas terras do que mais tarde seria o Brasil, e nos levar a conhecer *suas ações frente aos direitos de propriedade seus e de outrem* (p. 11).

Ao entender a propriedade como uma *relação social*—não um recurso ou bem em si,