

The Nature of the Future: Agriculture, Science, and Capitalism in the Antebellum North. By *Emily Pawley*. Chicago: University of Chicago Press, 2020. 312 pp. Notes, index. Cloth, \$50.00. ISBN: 978-0-226-69383-5.

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Reviewed by Jamie L. Pietruska

Emily Pawley's *The Nature of the Future* is a strikingly original study of agricultural improvement focused on New York State in the first half of the nineteenth century that draws together agricultural and environmental history, the history of science, and the history of capitalism. The book's title gestures toward its main argument: that northern farming practices and ideas (neither "traditional" nor "precapitalist") constituted a modernizing, commercial, and contested agricultural economy driven by improvers' speculative visions of the future. How best to transform physical nature into future profit was the central question that agricultural improvers sought to answer with myriad theories, experiments, implements, and organisms, all of which provoked debates over whose vision of the future was the most desirable. As this book reveals, material agricultural practices are inseparable from ideas about nature and markets.

Agricultural improvement—a "global phenomenon" by the mid-nineteenth century—had its deepest and widest American roots in the state of New York, which had the nation's biggest population, highest farm value (over half a billion dollars), greatest fruit and livestock production, and most purchases of farm machinery (p. 5). As Pawley demonstrates, this booming agricultural economy was attributable not solely to the opening of the Erie Canal in 1825 but also to an expanding culture of rural improvement that bore striking similarities to the turbulent world of capitalism typically associated with nineteenth-century American cities: "it was volatile, dependent on uncertain projections of value, and on conflicting ideas about what markets could or should do" (p. 9). As Pawley demonstrates, the northern countryside—with its own dynamic world of commodity exchange, speculation, and fraud—deserves greater emphasis in histories of American capitalism.

Recent work at the intersection of the histories of science and capitalism has called for greater attention to the epistemic processes underpinning both, and Pawley broadens the analytical lens of knowledge production to encompass not only agricultural science and markets but also knowledge of the natural world. What comes into view in this approach to agricultural improvement is, as Pawley explains, a form of knowledge production distinct for its future-orientation and its preoccupation with determining value. Of course *the future* and *value* are

neither singular nor stable categories, and, as the book reveals, a range of actors made and indeed performed myriad predictions of how New York's landscapes would be transformed into profitable ventures; at the same time, farmers, merchants, and various experts sought to calculate the value of the flavor, color, and novelty of agricultural commodities. This was no easy task, as Pawley shows: "improvement, science, and capitalism twined with and fed on each other to produce, not a rational, calculated, centralizable vision, but multiple market futures and multiple definitions of value" (p. 18). Indeed, a central theme of the book is the messy, contested, and contingent nature of diverse improving practices and their resulting economic uncertainties.

In the book's four parts (Performances, Experiments, Futures, Values), Pawley offers a richly detailed and wide-ranging tour of agricultural improvement, beginning with, in part 1 (Performances), the formation of New York's "capitalist aristocracy" and its use of British improving literature in envisioning an American version of improvement, followed by a chapter on the formation of the category of the "middling farmer," who read improving literature, joined agricultural societies, conducted various experiments with livestock, crops, and fertilizer, and used new farm implements and accounting methods (pp. 23, 48). In part 2 (Experiments), chapters on the public culture of agricultural experimentation explore the genre of writing about the efficacy of new farming techniques and the importance of machine trials that tested and advertised innovations in technologies such as reapers, plows, and mowers. In part 3 (Futures), a fascinating chapter on the late-1830s speculative bubble in mulberry trees—a habitat for silkworms and thus the basis for a vision of the United States as a leading silk manufacturer—is followed by a chapter on the uneven and disorderly process of regional adaptation of landscapes to produce particular commodities. Part 4 (Values) examines the creation and stabilization of fruit varieties by nurserymen with pomological expertise and uncovers controversies over their authenticity that led to the publication of fruit "counterfeit detectors" that taught consumers to spot a counterfeit pear or apple, just as they would learn to spot a counterfeit bill. The book's last chapter, "The Balance-Sheet of Nature," traces the rise of analytic organic chemistry and its centrality to improvers' attempts to calculate the economic value of every aspect of the farm with a form of accounting that ultimately created "a new, durable language of nutritional value" (p. 191). An incisive epilogue traces connections between nineteenth-century agricultural improvement and industrial agriculture in the present day, in terms of knowledge production and commodification but also critique thereof.

The Nature of the Future is brilliantly conceptualized, convincingly argued, and beautifully written, with engaging and often witty prose. The breadth and depth of the research is impressive; Pawley skillfully synthesizes extensive archival material with careful readings of agricultural journals, scientific publications in botany, horticulture, and chemistry, and literary texts like Thoreau's *Walden*. Indeed, throughout the book, Pawley emphasizes the centrality of print culture and institutional networks that produced and circulated ideas about improvement. Readers will discover an important idea and a fascinating detail on every page of this remarkable book. *The Nature of the Future* is essential reading for historians of capitalism, science, agriculture, and environment, as well as nineteenth-century Americanists and a wider audience interested in how food systems have been historically connected to improving visions of multiple futures—many of which have not come to pass—and how we might understand the market logics and speculative visions of twenty-first-century agriculture during a period of climate crisis and its attendant economic and environmental transformations.

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Ethnic Entrepreneurs, Crony Capitalism, and the Making of the Franco-Mexican Elite. By José Galindo. Tuscaloosa: University of Alabama Press, 2021. xvi + 222 pp. Illustrations, notes, bibliography, index. Cloth, \$54.95. ISBN: 978-0-8173-2080-5.

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Reviewed by William Suárez-Potts

In *Ethnic Entrepreneurs, Crony Capitalism, and the Making of the Franco-Mexican Elite*, José Galindo has written a history of the Jean family, who began to immigrate to Mexico from France in the late nineteenth century. Family members quickly established themselves in commerce, the cotton textile industry, banking, and, eventually, real estate, in part through networks that they cultivated, both with other businessmen and with government officials. The Jeans thereby became associated with the Mexican elite that lived and sometimes suffered or profited during the decade of revolutionary civil war (1910–1920), and the ensuing, turbulent 1920s and 1930s. Ultimately, they shifted business activities but have remained in the nation's upper and upper middle classes. Galindo has thus written a social history of an