

Parts I and II cover the period from 1607 to 1789. The contributions of the Indians to the agriculture which was transplanted by settlers from Europe are treated at some length in Part I. Part II deals with early national land policy and the beginnings of technological progress in agriculture in this country.

In Part III, which covers the period from 1789 to 1861, the editor presents materials dealing with further technological progress and the beginnings of agricultural cooperative marketing. This period saw the introduction of the mechanical reaper, the steel plow, commercial fertilizers, and improved breeds of livestock.

Part IV covers the period from 1861 to 1914 and is headed "The First American Agricultural Revolution." Its main theme is rapid technological progress in American agriculture, with some attention to public land policy and the rise of farmers' organizations.

Parts V, VI, and VII deal with World War I and its aftermath with respect to American agriculture. Part V is short, covering only the years from 1914 to 1919. Part VI deals with the chronic agricultural depression extending from 1920 to 1932 and is concerned mainly with political efforts at farm relief. Part VII has to do with the New Deal era of the 1930's, and the materials are about equally divided between public policy with respect to agriculture and further technological progress.

Part VIII is headed "World War II and the Second Agricultural Revolution." It is regrettably short and considerably inadequate.

The book has numerous illustrations which are quite good, and the sections on chronology and recommended readings are useful. Although the work as a whole deserves a good rating, it has some serious deficiencies. For example, there is virtually nothing about the Populist movement in it, and the whole subject of farmers' movements is dealt with very scantily. The farmers' role in politics in this country has been much more important than these readings would indicate. The book could well have been considerably longer than it is.

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The American Civil Engineer: Origins and Conflict. By Daniel Hovey Calhoun. (Cambridge, Mass.: Harvard University Press, for the Massachusetts Institute of Technology, 1960. Pp. xiv, 295. Map, appendices, bibliographical note, notes, index. \$5.50.)

This book tells of the American civil engineer's rise toward professionalism. When agitation for internal improvements began early in the nineteenth century, the few native technologists were chiefly home-spun products of experience on surveying crews; in 1816 there were only about thirty in the whole country.

Interest in canals and railroads created a technical demand partially met by the United States Military Academy; by Alden Partridge's American Literary, Scientific, and Military Academy, established at Norwich, Vermont, in 1820; and Rensselaer Polytechnic Institute, founded in 1824. By the 1830's a number of institutions offered

engineering instruction: University of Virginia, University of Michigan, Hanover College, Miami University, University of Alabama, and others. The author says that when directors of internal improvements "created or found a supply of engineers, every step they took to assure that supply helped to fix the civil engineer as a separate occupational type in the United States" (p. 54).

Still, the civil engineer did not achieve status overnight, often being ambiguously involved on public projects in a position quasi-contractual or directorial, sometimes merely advisory, and frequently embroiled in state and local politics. In 1867, the founding of the American Society of Civil Engineers was a long step toward the professionalism the civil engineer enjoys today. Yet the author concludes that nineteenth-century experience made the engineer not an independent entity but, rather, dependent upon "a corporate America that supported the engineer, sustained the engineer, and quite early defined his character" (p. 199).

The author uses many details to illuminate adventures of such engineers as Benjamin Wright, Nathan Roberts, Jesse L. Williams, Benjamin H. Latrobe, and others, and reveals problems, engineering and human, in the building of the Erie Canal, Chesapeake and Delaware Canal, Wabash and Erie Canal, Baltimore and Ohio Railroad, and so forth. In this volume, a great quantity of information rests on copious documentation. Yet the piling up of minutiae about political and technological squabbles makes hard reading, chiefly because a pedestrian style does little more than list a catalog of facts. The writing calls for lift and flair. The numerous engineers, commissioners, and politicians who populate these pages emerge not as living human beings but only as automatons with names; a bald recital misses the drama that must have attended those ambitious construction jobs. Trite words like "case," "type," "the fact that," "field," "area," "participated" make the prose flat. The assembly of plentiful data merits approval for the workmanlike industry it shows, but unfortunately the narration plods with heavy foot.

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Steelworkers in America: The Nonunion Era. By David Brody. *Harvard Historical Monographs*, Volume XLV. Cambridge, Mass.: Harvard University Press, 1960. Pp. viii, 303. Tables, bibliography, index. \$5.00.)

It is remarkable that in America, despite the great natural resources and inventive genius of private enterprisers, both of which are conspicuous in the steel industry, workers in the mills from 1870's until World War I lived a life close to slavery—with subsistence wages, long hours of work, continual exposure to danger of death and injury, and a condition of servility. How was this possible? Besides describing the workers' conditions, David Brody has studied the economic and social forces affecting the iron and steel industry up to 1929 and offers a reasoned and well-documented answer. His findings do not reflect