as dramatically as do the novels of O. E. Rolvaag and Vilhelm Moberg which are also excerpted in this wide-ranging anthology. Accepting reality and doing what had to be done in a direct, matter-of-fact manner were qualities essential to the survivor. The autobiographical materials that demonstrate these qualities were selected from written memoirs, published books, oral histories, letters, diaries, and speeches.

For the concluding section, "Daughters and Granddaughters," the editor selected the work of six second-generation American women. Four of these tell of culture clash, misunderstanding, prejudice, and the pain of marginality experienced by daughters of immigrants "cut off from the culture of parents but not integrated into the mainstream of Anglo-American culture" (p. 280). The other two selections deal directly with relationships between ethnic women, traditional culture, and the women's movement. Although the editor formulated no definitive conclusion or interpretation, her final essay introducing "Daughters and Granddaughters" seems to ask the question, "Are third-generation American women producing a creative synthesis of their ancestral and American heritage?" This and more provocative questions underscore the need for serious studies on the history of immigrant women and their descendants.

Maxine Seller's anthology presents a panoramic view from the feminine side of American pluralism. The book is skillfully edited and includes a selective and thoughtful bibliographical essay. General readers will find *Immigrant Women* informative and interesting; teachers and students will find it a useful source book and a welcome addition to the still sparse literature on immigrant women.

Pittsburgh CORINNE AZEN KRAUSE

Electric Traction on the Pennsylvania Railroad, 1895-1968. By MICHAEL BEZILLA. (University Park: The Pennsylvania State University Press, 1980. Pp. 233. Acknowledgments, introduction, illustrations, notes, note on sources, appendixes, index. $16.75.)

Michael Bezilla, historian of the Pennsylvania State University, wrote this with the cooperation and support of the Association of American Railroads and the Pennsylvania Historical and Museum Commission. Therefore much of the practical interest of this ex-

cellent study will be to electrical engineers and technicians. Because it also deals with problems of financing and government regulation, it has economic and some political connotations. For one such as I, unenlightened on the mysteries of electricity, the many appropriate photographs and drawings gave this reviewer an education.

This work is a closely reasoned and technologically oriented discussion of the Pennsylvania's experience with electricity in operating a portion of its vast transportation empire. The railroad's experimentation with this new source of energy began in 1895 with the 600-volt direct current trolley electrification of its Burlington, New Jersey-Mount Holly Branch. Favorable comments from neighboring residents escaping pollution produced by steam power encouraged the PRR to tunnel the Hudson and East rivers and build a Manhattan terminal — projects impossible without electric power. This was done with electric traction (d.c.) carrying 600 volts with a third rail. However, the company decided to use alternating current for their suburban Philadelphia lines and almost everywhere else. The Pennsylvania worked closely with General Electric and Westinghouse, the largest producers of electrical equipment — particularly the former which leaned to direct current. The companies catered to every important request from the PRR, providing models as needed and often anticipating their demands.

The Pennsylvania's "marriage" with electricity was consummated in the flat terrain from New York to Philadelphia west to Harrisburg, and south from Philadelphia to Washington. The company's decision to electrify was a strange combination of caution, conservatism, and progressivism: cautious in that the road insisted on preliminary testing lasting several years, conservative in their financing on a pay-as-you-go basis, but essentially progressive in utilizing a new energy source ultimately used on less than 20 percent of the country's track. Pennsylvania's golden years came during the enlightened administrations of W. W. Atterbury (1925-1935) and Martin W. Clement (1935-1949).

Direct current still beguiled many railroad men well into the twentieth century, including firms producing transformers and other equipment, partly from the support given it by Thomas A. Edison. However, direct current imposes limits of power distribution, and this created particular problems for railroad operation. Ultimately the problem was solved by constructing a catenary — a system of distri-

bution through poles to which were connected crossarms bearing insulators and messenger and high-voltage transmission (132,000 volts) wires over the tracks contacted with a pantograph on the locomotive. Wheel arrangements were another hazard when high speeds produced oscillation that wore down the track at an alarming rate. Improved chassis and provision of motors coupled to the wheels to reduce damage and injury to train personnel had to be invented. All this took time and money. Yet progress was made. Through electric service between New York and Washington was facilitated by a PWA loan with the full blessing of Harold L. Ickes in 1935. Improved locomotives, motors, and couplings kept the technological pace, but the geographical limits and financial feasibility of electrification had been reached. Diesels provided the answer for the line's other needs after World War II.

Bezilla is at his best in discussing technical questions and presenting projected cost estimates, savings, and motive power expenses. However, he is less informative when it comes to dealing with the operating expenses of electric transmission and distribution facilities. For the later years more might have been said about the damaging competition of trucks and airlines and how the railroad industry as a whole failed to rationalize its technical system and failed to maintain the quality of its passenger service. Calculations of adequate rates of return normally related to investment should have been presented. These are not, however, intended as serious criticisms to an essentially first-rate work.

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Erie: Chronicle of a Great Lakes City. By EDWARD WELLEJUS. (Woodland Hills, California: Windsor Publications, Inc., 1980. Pp. vii, 144. Acknowledgments, photographs, bibliography, index. $17.95.)

Erie, Pennsylvania, has had a turbulent history. From its beginnings as a frontier outpost it was a point of contention in the Anglo-French conflicts for North America in the mid-eighteenth century. The American Revolution brought it under yet another flag, although