
Science & Technology

MEMOIRS OF AN UNREPENTANT FIELD GEOLOGIST: A Candid Profile of Some Geologists and Their Science, 1921–1981
by F. J. Pettijohn
Univ. of Chicago, 1984
260 pp. \$25

Pettijohn's scientific career spans an era of transition in geology—from the heyday of rock-climbing field work to the rise of geochemistry. This memoir is, in part, a hymn to older ways. Born at the turn of the century, graduating from the University of Minnesota in 1924, Pettijohn set out with a friend in 1927 on a 600-mile geological trek through the wilds of north Canada. His recollections of this "young man's odyssey" read more like tales by Mark Twain than a diary of a scientist. Included are stories of his canoe, constructed Indian style with "birch bark on spruce frame, sealed with pine pitch"; "Rattlesnake Bill," the gold prospector with a mail-order bride; an attempted ride on a flatcar that ended when an irate train conductor discovered the author and his companion. Pettijohn also recounts his work with some of the great geologists of his youth, including W. H. Twenhofel, a pioneer in sedimentology, which became Pettijohn's area. It was a thriving specialty during the 1920s: Sedimentary rocks contained the oil on which the nation's economy depended. The author taught for 23 years at the University of Chicago where he observed the arrival of geochemistry—analysis of rock formations based on the use of isotopes, x-ray diffraction, and mass spectrometry. "Just expensive hand lenses," he jeers. Pettijohn moved on to Johns Hopkins, where he continues through retirement "to depend on field boots, hammer, and eyes."

THE TECHNOLOGY EDGE: Opportunities for America in World Competition
by Gerard K. O'Neill
Simon & Schuster, 1984
299 pp. \$16.95

O'Neill, a Princeton physicist, is quick to warn that this is not another Japan, Inc. sermon or another "book about management." His focus is on the international market opportunities (worth "tens and hundreds of billions" of dollars) that the United States stands a chance of losing—opportunities created through American technological innovation. Through "timidity, shortsightedness, greed, laziness, and misdirection," says