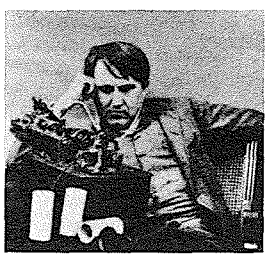

Edison National Historic Site.

new Adam in yet another New World Eden—technology. Dubbed the "Wizard of Menlo Park" by newsmen, Edison became in the public's eyes a near superhuman figure who—with his perfection of the incandescent lamp in 1879—brought light to the masses. After World War I, Edison's image reversed. Caught up in technology's swirl and noise—partly fostered by Edison's invention of the phonograph, the carbon telephone transmitter, and the motion-picture projector—many Americans began to yearn for the old days of innocence and rugged individualism. Edison filled that bill too. He was the enterprising All-American Boy (at age 12, he sold newspapers on Michigan's Grand Trunk Railroad), the Horatio Alger Hero (learning telegraphy from a station master whose son he had plucked from the path of an errant boxcar), the Self-Made Man working through the night in his lab. Wachhorst's study of Edison biographies, press accounts, testimonials, and even movies offers a lively panorama of past American hopes and self-perceptions.

GENES, MIND, AND CULTURE
by Charles J. Lumsden and Edward O. Wilson
Harvard, 1981
428 pp. $20

There is no doubt among scientists that genes play a role in behavior—even in collective behavior, which we call culture. Controversy arises, however, over the extent of that role. Here Wilson, a biologist, and Lumsden, a physicist, postulate a process by which genes and culture directly interact in evolution. Furthermore, they attribute to genes the dominant role in shaping the kinds of behavior individuals will display within a given culture. This genetic imperative is mediated through primary and secondary "epigenetic" rules—mental patterns that govern sensory screening and the handling of information through memory and emotional response. These rules affect our choices among various cultural options: to shave or not to shave, preference for sweet or sour. Over time, certain forms of behavior are selected as more conducive to survival; the genetic patterns underlying these forms are accordingly selected. The more traditional view, held by

most anthropologists and social scientists, allows genes only a very general influence in the shaping of collective behavior. The implications of the debate are far-reaching. For example, if aggression, which has marked much of human history, is, as anthropologists maintain, culturally based, then it is possible, through conscious innovation, to modify our behavior. But if aggression is part of our genetic heritage, as Wilson and Lumsden suggest, then prospects for change, at least over the short term, are much more limited.

THE PHYSICISTS
by C. P. Snow
Little, Brown, 1981
192 pp. $15.95

Straddling three worlds, Charles Percy Snow (1905–80), physicist, novelist, statesman, sought in his own life, as in this engaging history, to make connections among them. Beginning with Cambridge physicist J. J. Thompson's 1897 discovery of subatomic particles, Snow proceeds through the "golden age" of physics, the 1920s, during which a truly European community (with research hubs in Göttingen, Copenhagen, Rome, and Cambridge) plumbed the secrets of the atom. Instead of focusing on the biggest name, Einstein, Snow evokes, in anecdotal style, the multitude of individuals who toiled and the variety of talents they brought to bear on this scientific endeavor. Discovering the atom's nucleus in 1911, Ernest Rutherford, the great experimental physicist, provided valuable data for Niels Bohr's pioneering model of the atom. The work of the "marvelous decade" was crowned, in 1928, by Paul Dirac's synthesis of various theories of atomic structure with Einstein's theory of relativity. The community was splintered in the 1930s, when Nazi and Fascist anti-Semitism forced many physicists to flee to the United States. Snow defends the Manhattan Project and its refugee scientists, who, knowing the Germans were fully capable of engineering an atomic bomb, raced to beat them to it. No believer in the neutrality of science, Snow bids the modern physicist to speak out on the implications of his work and to avoid "letting the conscience rust."