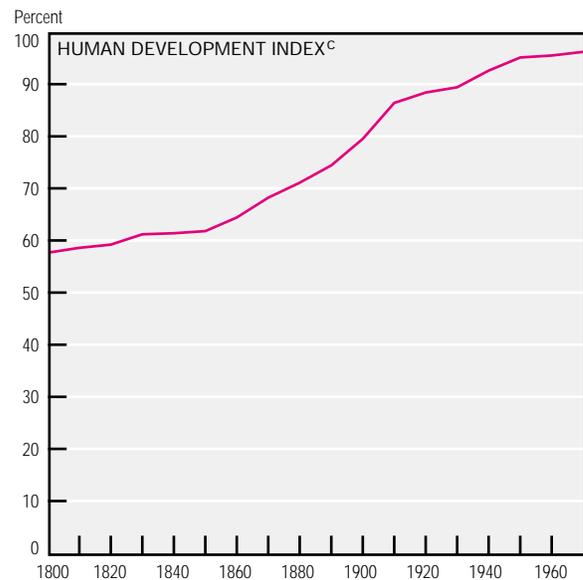
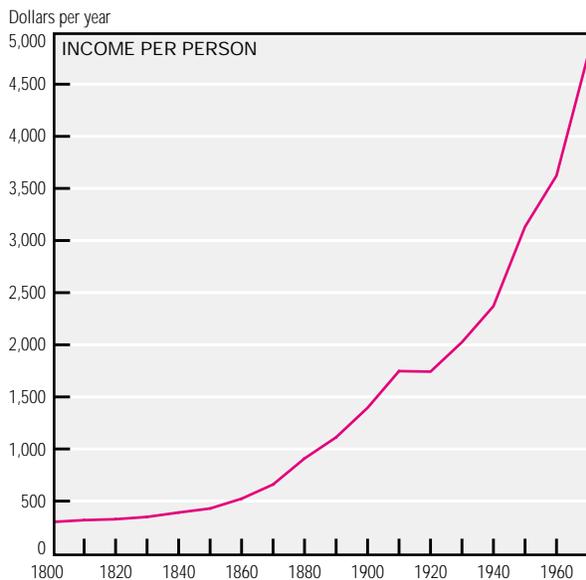
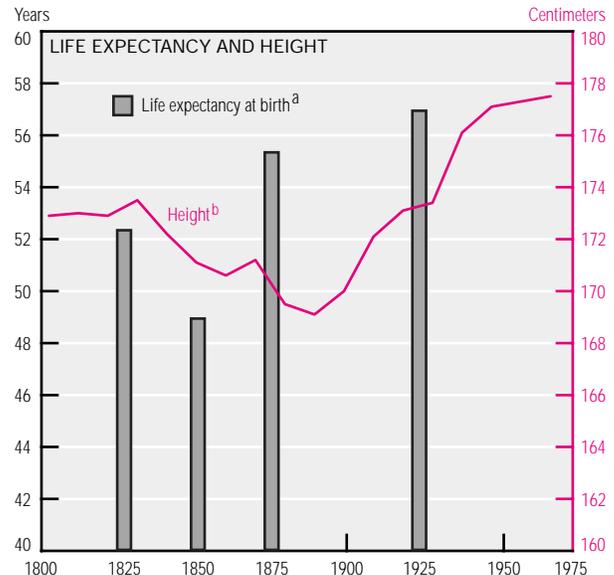
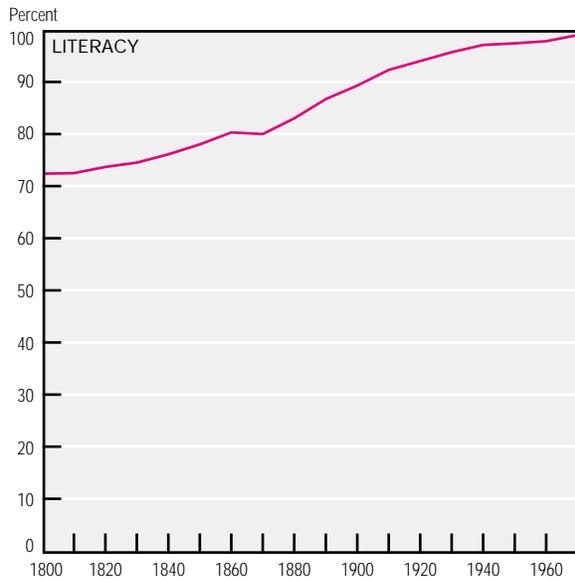


Human Welfare and Economic Growth



a. The data series for average life expectancy is incomplete.

b. Average height of U.S. military recruits.

c. The Human Development Index includes per capita income, average height, and literacy rates, weighted equally.

SOURCES: Dora L. Costa and Richard H. Steckel, "Long-Term Trends in Health, Welfare, and Economic Growth in the United States," in Richard H. Steckel and Roderick Floud, eds., *Health and Welfare during Industrialization* (Chicago: University of Chicago Press, 1997), pp. 47–89; and Robert W. Fogel, "Nutrition and the Decline in Mortality since 1700: Some Preliminary Findings," in Stanley L. Engerman and Robert E. Gallman, eds., *Long-Term Factors in American Economic Growth, Studies in Income and Wealth Series*, vol. 51 (Chicago: University of Chicago Press, 1986), pp. 439–527.

Health, literacy, and economic growth are intimately connected. A healthier, more literate population leads to more rapid productivity growth and improved living standards. At the same time, greater income growth enables people to purchase the goods and services necessary to improve education and health—more schooling, better nutrition, shelter, sanitation, medical care, and so on.

The U.S. literacy rate rose steadily from just over 72% in 1800 to almost 100% by the late twentieth century.

Progress in improving the population's health has been less steady, as evidenced by the long-term trend in life expectancy. Crowding in the nation's urban centers at the onset of the industrial age lowered standards of hygiene, worsened fetal and infant nutrition, and exposed a denser population to epidemic diseases. These conditions led to a significant decline in life expectancy at birth from the early through the mid-nineteenth century. No consistent time series on life expectancy is available, but mortality rates are

strongly correlated with stature. The average height of U.S. military recruits suggests that there was a downturn in life expectancy during the mid-nineteenth century.

The U.S. Human Development Index, which places equal weight on per capita income, average height, and literacy, suggests that growth in human welfare was most rapid during the late nineteenth century and the first decade of the twentieth. During the rest of the century, growth in the index was much slower, although still positive.