

deleterious effect on other aspects. Neither does he offer anything close to a full discussion of the morality of the institutions that produce economic growth. Friedman leaves too much out of his moral framework to claim that he has made a convincing case for the moral consequences of growth.

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The Escape from Hunger and Premature Death, 1700–2100: Europe, America, and the Third World

Robert William Fogel

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At a time when many lived mere calories from death, Adam Smith's claim that the changes engulfing Europe would result in "universal opulence which extends itself to the lowest ranks of the people," must have been difficult to accept; so difficult, in fact, that within one generation, even the next great economists, Ricardo and Malthus, were abandoning his optimism and predicting a future of subsistence living. Within two generations, Marx was accusing capitalism of "naked, shameless, direct, brutal exploitation." The criticisms did not stop there. With Communism surviving through the twentieth century, and antimarket bias always present, it is not surprising that analyses of who gained or lost from the Industrial Revolution have often been interpreted within the broader context of pro- and antimarket debates.

Thus, it is possible that *The Escape from Hunger and Malnutrition*, by Nobel Prize-winner Robert Fogel, could be seen as just another work in the battle of interpreting the Industrial Revolution. It should not. While it reviews recent advanced research in assessing historical well-being, it should not be seen as merely a methodological overview either.

Instead, *Escape* is the more complete technical component that underlies his recent general arguments presented in *The Fourth Great Awakening and the Future of Egalitarianism* (2000). In *Fourth*, he argues that people in Western nations have experienced such tremendous material advances that substantial new gains will come from nonmaterial (what he calls "spiritual") sources. Consequently, we must improve people's ability to make these nonmaterial gains, expand our notions of equality and justice to include spiritual well-being, and even figure out how to assess this criterion. (Though he defines spiritual well-being largely as self-realization, he acknowledges the importance of sacred spiritual values and argues that it is so early in these reflections that concepts of spiritual well-being and spiritual resources are not settled.)

The strong claim that we have made such substantial advances across the income spectrum to warrant an expanded concept of well-being requires strong verification.

Escape provides that verification via its review of recent research into this progress in the past three centuries. Interestingly, the very nature of the research required our having to improve our understanding of our needs, and in doing so, discovered how these needs have changed and pointed to how they will be changing in the future.

According to Fogel, battles to assess the Industrial Revolution have traditionally been engaged over “economic measures”—such easily determined, tangible criteria as real income and wages, Gini coefficients, output, calories, and so forth. He argues that, by these measures, the early Industrial Revolution was not as bad as critics have portrayed it. These measures indicate flat or minimal progress in equality and well-being through the mid-nineteenth century but with increasing gains in income and wages, caloric intake, quality of clothing and shelter in the United States and in Europe the latter half.

The economic measures of gains in the twentieth century are beyond dispute. Output of most goods rose. Nutritional quality of food increased. Real wages and income skyrocketed, especially for lower income families, causing Gini coefficients to plummet as income became more equally distributed. In fact, about two-thirds of the drop in the Gini coefficient in the past three hundred years occurred in the last one hundred. Even homelessness dropped: from between 10 percent and 20 percent in the 1800s, to less than 0.4 percent today. By economic measures, the twentieth century surely met Smith’s prediction of universal opulence.

However, what if those economic measures of wages, income, output, and calories do not tell us as much about well-being as we think? What if people themselves, and their needs, change over time? If so, then given amounts of income, wages, output, and calories will impact well-being differently depending upon people’s needs at the time they are received. If a calorie (or real wage) does not produce the same increase in well-being in one year as in another, then what measures should we use? How do we interpret them? It is here that the book takes off to review recent work by Fogel and others across the disciplines of history, economics, nutrition, and medicine.

Because the subjects of economic measures are intended to provide for physical well-being, we should consider physical measures. If physical needs increase by 10 percent but income only rises by 5 percent, people are in fact worse off. One assesses the change in physical needs by looking at the final picture of how people themselves turned out physically.

Fogel then examines how the use of such biomedical measures as life span, height, body mass, and morbidity provides a richer picture of the changes following the Industrial Revolution. Because these measures indicate how the body has responded to the combination of what was available to it (the economic measures) as well as to the demands made upon it (from work effort, lifestyle, disease, living conditions, and so forth), they more accurately reflect changes in well-being than do the economic measures alone.

They also show a different picture. In general, the biomedical measures stagnated or declined and inequality increased for people in the United States and many European

countries in the early 1800s. Although they gradually improved in the later 1800s, full recovery did not occur for some factors until the early to mid-twentieth century. For example, in what may constitute the best cocktail party fact to take from the book, average height of American males peaked in 1790, and did not return to that level until approximately World War II.

On the other hand, biomedical measures indicate vast gains in the twentieth century. Heights have risen extensively: for instance, average height of Dutch males has risen by eight inches since 1850. Longevity has extended from the forties in the 1800s to the high seventies today. The biomedical measures indicate even greater gains for the poor than the traditional economic measures. Life expectancy of the poor has risen absolutely from forty-one to seventy-five today (greater than the cumulative gains in all prior human history), and the gap in longevity between that of rich and poor has fallen from seventeen years in 1875 to two to four years today. In Britain, the gap in height between rich and poor has fallen from approximately five inches in the early nineteenth century to one inch today.

How does one square the stories of the economic and biomedical measures? Research in nutrition and medicine indicates that having less food available relative to need, particularly when young (even in utero), results in people being weaker on biomedical measures for health, longevity, and growth. A major factor is that rapid urbanization in the early 1800s, combined with greater mobility, resulted in higher rates of disease. This raised caloric needs because people use calories and nutrients less efficiently when sick: They do not process food as effectively and burn up many calories in fighting off the disease. The decreases in stature, body mass, and longevity, as well as increases in morbidity indicate that increases in economic factors (e.g., calories from increased output) were swamped by greater biological demands on people in the early nineteenth century. In contrast, advances in medicine and improvements in public health measures in the late nineteenth and early twentieth centuries reduced disease pressure and allowed people to take better advantage of increasingly available calories and output of other goods.

The biomedical measures also help quantify changes in people themselves: People are living longer, growing larger, and working more efficiently than ever before. Fogel has called this *technophysio evolution*, a synergistic process in which economic and health changes have allowed people to grow larger and work harder, unlocking yet more advances. Understanding technophysio evolution helps one appreciate the tremendous gains that have occurred—the “escape from hunger and premature death.” However, the expansion of indicators of well-being to include biomedical measures, and their discovery of this evolution, also naturally raise the question of where we are headed and how we will assess that progress.

Fogel closes with an examination of how people will have more time to devote to spiritual development, defined by him here largely as self-realization (though his more complete exploration in *Fourth* certainly leaves room for a more comprehensive and Christian notion of spiritual development). He argues that two particularly important

components in enabling greater personal development will be more education and improved health care.

Thus, the book is neither merely an examination of the gains from the rise of market economies nor merely a technical review. Instead, the conclusions regarding progress in material well-being evince the need to reflect more deeply on what constitutes well-being and how we should measure it, especially if nonmaterial well-being increasingly matters for progress. It was hard enough assembling the picture from biomedical measures. It will be even harder to settle upon measures of nonmaterial well-being. In this, the more comprehensive vision of a human person offered by Christianity may be particularly important. For this reason, *Escape* may spark a rich and novel reflection on the intersection of markets and morality.

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