

Rethinking the Industrial Revolution

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How the industrial revolution raised the quality of life for workers and their families.

Since it began approximately two centuries ago, the industrial revolution has captured the minds of an endless number of historians and economists. An era of relatively laissez faire economics, the period between 1760-1850 is for many academics the key to unlocking the secrets of economic growth, technological change, and economic development. But, for defenders of the classical liberal tradition of free enterprise, the industrial revolution is important for more insidious reasons. Writers such as Dickens, Engels, and the Hammonds have made the terms industrial revolution and capitalism synonymous with degradation of the working class. Pessimistic interpretations of the industrial revolution have led to the popular acceptance of what R.M. Hartwell terms the "theory of immiseration"—a belief that unrestrained capitalism was making the rich richer and the poor poorer during the industrial revolution (Hartwell, 1974). For the general public, the horrors of the industrial revolution prove the horrors of capitalism.

But it is not only laymen who perceive the industrial revolution in terms of "dark, satanic mills." A brief glance at almost any university history or English textbook reveals that most academics who do not specifically study the industrial revolution accept without reservation the view that capitalism led to a deterioration of living conditions for the working class. For example, a text commonly used in college British literature classes describes the industrial revolution in these terms:

For the great majority of the laboring class the results of the policy (of laissez faire) were inadequate wages, long hours of work under sordid conditions, and the large-scale employment of women and children for tasks which destroy body and soul. Reports from investigating committees on coal mines found male and female children ten or even five years of age harnessed to heavy coal-sledges which they dragged crawling on their hands and knees . . . (Norton Anthology, p. 3).

Such harsh interpretation of the industrial revolution has directly affected public policy. The industrial revolution has become a successful battle cry for detractors of capitalism. The specter of working class poverty and misery during the industrial revolution has been and still remains an important justification for government intervention into social and economic affairs. A vast amount of legislation, from minimum wage to antitrust laws, owes its existence to the anticapitalist mentality created by pessimistic views of the industrial revolution. As Nobel laureate F.A. Hayek pointedly argues, the industrial revolution portrayed by the pessimists is the "one supreme myth which more than any other has served to discredit the economic system to which we owe our modern day civilization" (Hayek, pp. 9-10).

This paper will attempt to show that the pessimistic interpretations, however popular, are unfounded. It will be argued that the quantitative (material) standard of living improved as real wages rose, while falling mortality rates indicate that the qualitative (sociological) standard of living also improved. Although there was considerable social and economic disruption throughout the revolution, this paper will try to show that these problems were caused by various government interventions, especially the Napoleonic Wars. Far from being a cause of misery and despair, this essay concludes, capitalism in the early nineteenth century improved the standard of living and set the stage for the modern comforts that we enjoy today.

An Increase in Real Wages

As noted above, the pessimistic case is widely accepted by both the general public and academia. However, it is fair to say that the majority of modern economic historians who study the industrial revolution believe that at least a slight increase in the material standard of living occurred. Since the introduction of reliable statistical evidence in Sir John Clapham's *An Economic History of Modern Britain* in 1926, it has become increasingly obvious that real wages rose. The evidence is now so conclusive that one historian has confidently declared that "unless new errors are discovered, the debate over real wages in the early nineteenth century is over: the average worker was much better off in any decade from the 1830s on than any decade before 1820" (Williamson, p. 18).

The evidence vindicates such confidence. Although money wages remained stable, the prices of manufactured and agricultural goods plummeted as entrepreneurs struggled to deliver consumers low-priced goods and services (Hartwell, 1971,

pp. 326-27). Although the extent of the increase in real wages is hotly debated, the most recent evidence suggests that blue-collar real wages doubled between 1810 and 1850 (Williamson, p. 18), McCloskey, although emphasizing a much longer period of time, also concludes that real wages increased significantly. He argues that real wages rose from an average of £11 per capita in 1780 to £28 per capita in 1860 (McCloskey, p. 108).

As one can imagine, the increase in real wages resulted in significant improvements in the standard of living. An excellent example is the changes in diet that occurred. Per capita consumption of meat, sugar, tea, beer, and eggs all increased. An even better indication of the rising affluence was the great increase of imported foods. Per capita consumption of foreign cocoa, cheese, coffee, rice, sugar, and tobacco increased. Meanwhile, meat, vegetables, and fruits, long considered luxuries, were by 1850 eaten regularly (Hartwell, 1971, pp. 328-29). In fact, the average weekly English diet of 1850—five ounces of butter, thirty ounces of meat, fifty-six ounces of potatoes, and sixteen ounces of fruits and vegetables—is quite similar to the English diet of today (Hartwell, 1971, p. 330).

Although such improvements obviously are important, they take on added significance when considering the large population increase that took place during the industrial revolution. Because of a fall in the death rate, the population of England and Wales rose 1.25 per cent per year between 1780 and 1860, an annual expansion that translates into an unprecedented threefold increase (McCloskey, pp. 105-108). Rising real wages (and consequent increases in food consumption) coupled with a rapidly rising population was a first in European history. The Malthusian trap of geometrically increasing populations outstripping arithmetically increasing food supplies had finally been broken. Whereas more people invariably resulted in less food per person throughout earlier European history, the industrial revolution provided more food per person. Breaking the bonds of Malthus is perhaps the crowning accomplishment of capitalism in general and the industrial revolution in particular.

Untenable Arguments

Considering the preponderance of evidence indicating substantial improvement in real wages, it is clear that the arguments of early pessimists, such as Engels, have become untenable. Clearly, the material standard of living did not plummet. With the advent of reliable statistical evidence supporting real wage increases, sophisticated pessimists began to emphasize the qualitative effects of industrialization. Openly admitting that the working class enjoyed higher wages, more food, and better clothing, these pessimists argue that the cost for such gains in material wealth was dear. They contend that the evils of child labor, sordid working conditions, increased pollution, and various other discomforts outweighed any progress due to increasing real wages. E.P. Thompson, in his influential book *The Making of the English Working Class*, succinctly summarizes this new pessimistic position, arguing that, “By 1840 most people were ‘better off’ than their forerunners, but they suffered and continued to suffer this slight improvement as a catastrophic experience” (Rude, p. 67-68).

The pessimistic quantitative versus qualitative position is open to considerable criticism. For example, many of the poor conditions cited by the pessimists existed well before the industrial revolution. Pre-industrial society was very static and often cruel—child labor, dirty living conditions, long working hours, and a host of other ills associated with nineteenth century capitalism were just as prevalent before the industrial revolution. Although by today’s standard conditions were indeed poor, they were no worse than living conditions before the revolution (Hartwell, 1971, pp. 339-341).

A second general problem with the new pessimistic position is that it fails to take into account the significant improvement in life expectancy that took place. The great population explosion that happened during the industrial revolution was fueled by a steep fall in death rates. Even in cities, where living conditions are said to have been the worst, mortality rates improved somewhat (McCloskey, pp. 105-106). Deteriorating living conditions and longer life spans are difficult positions to reconcile. Clearly, improving mortality rates indicate that the standard of living rose during the industrial revolution.

Besides the two general arguments outlined above, the qualitative pessimistic position can be refuted by a close look at its specific charges.

Technological unemployment and underemployment. It has been long held by many pessimists that the wage increases of the industrial revolution were eroded away by extremely high unemployment and underemployment rates caused by the introduction of labor-saving technology. Although there were some pockets of technological unemployment, the calculations of Williamson suggest that the unemployment rate was at most eight per cent per year, and was probably far lower (Williamson, p. 22). Furthermore, the stable money wages between 1820 and 1850 indicate that there was little competition from unemployed workers that would have lowered wages (Hartwell, 1971, pp. 318-319). As for underemployment, the tremendous shift from agriculture, which provided only seasonal employment, to the more stable manufacturing sector, led to decreasing underemployment (Hartwell 1971, p. 323).

Pollution and Urban Conditions. Another popular argument of the pessimists is that the real wage increases were merely “bribes” to workers forced to endure polluted and unsanitary urban conditions. According to this line of reasoning, the gain in real wages was simply a means of luring workers to the horrid working conditions of the cities, and did not constitute a net gain in wealth. Although it is certainly true that urban conditions during the industrial revolution were appalling, the aforementioned improvement in mortality rates indicates that conditions were not bad enough to grievously affect the health of

the city dwellers. Secondly, the workers voluntarily moved into urban areas, suggesting that the “opportunity cost” of pollution and various other urban discomforts *did not* outweigh the gains in real wages.

Child Labor. Another qualitative argument brought forth by the pessimists is that children were forced to endure long hours of work in unhealthy conditions. Although the existence of child labor cannot be denied, it is clear that most pessimists have overstated both its magnitude and the effects on the health of the children involved. In fact, much of the evidence for the pessimist’s case comes from the very famous, yet very inaccurate, reports from the government committees investigating the factory system. Almost all of the “condition of England” novels by Dickens, as well as the works of Engels and the Hammonds, have been in large part based on these committee reports (Jefferson, p. 189). Politically motivated and seriously defective, the evidence in these reports is marred by the fact that the doctors who testified against child labor in the factories had not even been in a factory and refused to testify under oath (Hutt, pp. 161-167). Moreover, the great improvement in mortality rates seems to indicate that either child labor was not extensive as before or was less harmful. Indeed, it was the great improvement in productivity instigated by the industrial revolution that has enabled Western societies to banish child labor.

Capitalism and “the spirit of the age.” Perhaps the most common yet most difficult to define charge made against capitalism and the industrial revolution is that the working class was filled with “spiritual” loss. According to this argument, rural farm workers were torn from their roots and thrust into the industrial towns and cities, thus losing sense of their heritage and individualism. However, the very fact that workers moved voluntarily from rural to urban areas once again suggests that the advantages of more material wealth outweighed the “opportunity cost” incurred from the move. Moreover, many friendly societies, workers’ societies, and voluntary organizations developed during this time, throwing the whole notion of “isolation of the individual” into dispute (Ashton, p. 137).

Any sociological costs endured during the industrial revolution must be counterbalanced against the many sociological benefits. For the first time, there was a sense of hope and optimism. The industrial revolution spawned the attitude that progress could be made and problems could be solved. Perhaps it is worth quoting Hartwell at length on this point:

The new attitude to social problems that emerged with the industrial revolution was that ills should be identified, examined, analyzed, publicized, and remedied, either by voluntary or legislative action. Thus evils that had long existed—child labor, for instance—and had long been accepted as inevitable, were regarded as new ills to be remedied rather than old ills to be endured (Hartwell, 1971, p. 343).

Government Intervenes

As the above analysis demonstrates, the industrial revolution resulted in a significant improvement in the quality of life for the working class. However, progress was slow, uneven, and sometimes nonexistent during many periods. For example, in the early stages of the revolution growth was minimal, resulting in little or no improvement for the working class (Williamson, p. 162). Is capitalism to blame for this slow rate of progress? To the contrary, it was the many forms of government intervention, not capitalism, which slowed British economic growth during the industrial revolution.

Perhaps the most important of these many interventions that hindered progress was the long period of intense war during the early years of the revolution. From 1760 to 1815, Britain was constantly engaged in war, either against France or the American Colonies. In fact, between 1780 and 1810, England was in the midst of a massive military build-up that was unmatched until World War I (Williamson, p. 163). Early commentators were quick to recognize the debilitating effects of this military build-up on the English economy. The historian J.E. Thorold Rogers, for instance, observed that the cost of the Napoleonic Wars was high indeed:

Thousands of homes were starved in order to find the means for the great war . . . the resources on which the struggle was based, and without which it would have speedily collapsed, were the stint and starvation of labor, the overtaxed and underfed toils of childhood, and the underpaid and uncertain unemployment of men (Rogers, 1891, quoted in Hartwell, 1971, p. 326).

Modern statistical evidence and economic theory lends support to such observations. Government war spending and borrowing increased interest rates, thus “crowding out” private investors who desperately needed capital to construct new factories, build better canals, and design new inventions. Growth was present during the war, but it was excruciatingly small. In the long run, this meant fewer jobs and lower wages for the working class.

But, for the common man, the war had more painful and immediate consequences than slowing the rate of economic growth. Various government schemes to finance the war debt led to monetary instability and uncertainty. This monetary instability, coupled with severe harvest failures, led to rapidly increasing food prices throughout the Napoleonic Wars (Redford, pp. 89-93). In fact, food prices soared upward by more than twenty-five per cent (Williamson, p. 187). Considering that the British working class then only earned on the average little more than £11 per year, it is no wonder how these developments led to hardships and deprivation that invariably resulted in social unrest.

Although decidedly the most important, war was not the only form of government intervention that decreased the quality of life. Government monopolies, such as the East India Company and Cutler’s Company, served to lessen economic

efficiency and growth. The entire area of foreign commerce and trade was forced to contend with massive government regulation (Ashton, pp. 138-39).

Notwithstanding the popularity of pessimistic interpretations, the evidence of increasing real incomes and improving mortality rates indicates that significant improvement took place in the standard of living of the working class. These factors and other evidence also suggest that most qualitative aspects of the quality of life at least remained stable, and probably improved. This progress took place despite constant warfare and other counterproductive forms of government intervention that significantly hindered improvement.

While these immediate effects should not be overlooked, the real benefits of the industrial revolution are enjoyed by those living in today's world of comparative luxury and splendor. The industrial revolution was the "great discontinuity" that built the foundations for our modern society (Hartwell, 1971). It has led us into an age without the famines, epidemics, and other disasters that continually plagued preindustrial societies. Perhaps the only way to fully appreciate the impact of the industrial revolution is to look at those in the modern world who have yet to undergo industrialization. The fate of the hungry and disease-ridden peasants in such areas as Africa and India is perhaps the most forceful and convincing argument in favor of capitalism's industrial revolution.