THE INDUSTRIAL REVOLUTION

I. Purpose and overview of lecture

A. To provide linkage with what was said at the end of the previous lecture
   1. To explore the reasons, in other words, that Metternich was fighting a losing battle—how change in the material world was undermining the stability he tried to preserve

B. To explore further some of the previously discussed problems of definition—in particular, the meaning of “revolution”

C. To examine the prerequisites and historical origins of industrialization

D. To evaluate the accomplishments, paradoxes, and ambiguous aspects of the industrial revolution

II. Further problems with the term “revolution”

A. The term is difficult and confusing enough in regard to political revolution

B. Industrial revolution is obviously something entirely different
   1. So much so that it appears misleading to use the same term for both of them
   2. There was little drama or rapid transformation, no street fighting, storming of barricades, new constitutions, etc.
   3. And other matters, mentioned in earlier lectures, have little relevance: institutional focus, utopian-ideological factors, etc.

C. Many economic historians dislike the term “industrial revolution” and suggest other, less misleading terms
   1. For example, simply “rapid economic change,” or “industrial transformation”
   2. They have emphasized how the so-called industrial revolution was a gradual affair
      a) It had no clear beginning, and even less a clear ending
      b) Such is, of course, a problem with any “event;” even the French Revolution “began” and “ended” only in the eyes of later historians
c) Yet, still, there is a more obvious sense of the French Revolution having begun and ended than was the case with the industrial revolution

D. Arguments in favor of retaining the term revolution
   1. It is well established, and trying to drop well-established terms is usually a losing battle
      a) It has been widely used since the 1880s, when a series of lectures by Arnold Toynbee gave it some theoretical standing
   2. The developments encompassed in the term "industrial revolution" do deal with fundamental transformation, of “revolving,” so that utterly new conditions finally result
   3. The industrial revolution produced a new society, new classes, new cities, new relations of production
   4. More centrally: A key quality of modern industrialization is its capacity for sustained, rapid growth—powerfully undermining stability and tradition
      a) And such a sustained dynamism had never before been introduced into human society
      b) It has been responsible, in other words, for a profound “revolutionizing” of the human condition
   5. Indeed, modern industrialization appears to require constant, rapid, and finally "destructive" growth
      a) Societies, economies have to be “jolted” out of their traditional ways before it can really succeed
      b) A certain critical minimum has be exceeded
      c) Slow increments of growth do not allow for the “break-away” into a kind of different sphere
      d) And this in part explains the “pain” associated with industrialization

III. Paradoxes of industrialization—and of modern times:
   A. Ever-growing material welfare at the expense of psychological discomfort and alienation
   B. A full stomach but a yearning for the “wholeness” of traditional societies
   C. A growing power over the physical environment
      1. But one that seems to entail a growing ugliness of the
environment we “control”

2. And growing evidence of a coming ecological disaster

D. New, unprecedented amounts of leisure for the great mass of the people
   1. But little concomitant sense of how to manage that leisure, especially for the common people

E. Thus, with all their wondrous powers, modern people have an increasing sense of malaise, anxiety, and alienation
   1. They have created a world of concrete, steel, and glass, of noise and fumes, of frightening, often invisible pollutants—and an all pervasive ugliness

F. It is thus hardly a surprise that we are drawn to the questions:
   1. How did it all start?
   2. Might it have been otherwise?
   3. Does the past give us some guide in how better to manage the future?

IV. Historical origins and prerequisites of industrialization

A. There are many theories about the origins of modern industrialization

B. These have appeared over the past century in dazzling profusion, with no sign of let-up

C. Each new one seems substantially to undermine previous ones

D. Thus, historians and economists have become ever more reticent to make categorical statements about what was essential to industrialization
   1. It is ever more clearly a much more complicated phenomenon than many at first thought

E. But students of industrialization do still tend to divide up among the “pessimists” and the “optimists”
   1. That is, those who see the industrial revolution primarily in negative terms and those who see it in positive terms
   2. Even in this regard there has been a growing consensus that the optimists have carried the day, at least in terms of many of the first arguments about the negative impact of industrialization

F. Similarly, there is a growing consensus that the process of industrialization cannot be attributed to a single factor
1. Rather, there was an extremely complex interweaving of factors, making each example of industrialization, in various countries, in certain ways different

V. The role of technology

A. The earlier, simpler accounts used to give first place to the introduction of new technology, which is the common-sense approach
   1. Beginning with textiles, the introduction of such things as the flying shuttles, spinning jennies, water frames, cotton gin, etc.
   2. Then moving on to technological advances in steam engines, railroads, iron, steel, chemicals, electricity, etc.

B. These remain undeniably an essential part of the story, but scholars have become more impressed with other, less obvious or tangible factors
   1. Technology is in a way a secondary matter: It has been seen that simply giving technologically advanced machinery to pre-industrial populations usually does not solve much
   2. They are not really ready to receive them; their society and culture are not prepared
      a) It is the elusive nature of this preparation that has interested scholars of industrialization
   3. This might all be summarized as the importance of the “historical moment,” the sum-total of historical experiences of a given society
      a) In some cases, the societies are relatively much ready (as was Japan in the late nineteenth century)
      b) In others, they are far from ready and remain so for the nineteenth and twentieth centuries (as much of Africa and South America at the same time)

VI. The “Awakening of greed” and breaking-up of social solidarity

A. Of the factors that are not generally appreciated, this may be the most important, if also controversial
   1. But I have chosen a provocative way of stating what I had earlier referred to as a “jolt” to tradition, or breakdown of
traditional ways of producing, marketing, etc.

2. It might similarly be stated as the awakening of the belief in genuine and lasting change, of unlimited expectations for “progress” in society and in one’s personal fortunes

B. This change of *mentalité* (to use a French term with rich connotations) is apparently among the fundamental and most difficult to accomplish

C. In Europe, the process was very long in evolving
   1. It appears to have had something to do with the Protestant religion, especially its Puritan variety (though this has been an area of recent scholarly doubt and debate)
   2. Above all, the notion of “good works”—success in the material world is to be taken as a sign of divine favor
   3. Linked to it: belief that wealth is not to be consumed immediately
      a) Rather, it is to be invested, managed, the pleasures associated with it “deferred”

D. This cluster of attitudes has also been called “bourgeois” by some observers
   1. It is to be distinguished from aristocratic sumptuous display, prodigal consumption, and conspicuous "laziness"
   2. Similarly, it is different from the immediate consumption (almost by necessity) of the very poor, who cannot save because they don’t have enough

E. There has been much debate, however, about how Protestant or how bourgeois these qualities in fact were
   1. There were certainly many Catholics and aristocrats who were good businessmen
   2. And many Protestants who were not
      a) Indeed, the “Protestants” who were successful have been narrowed down to Quakers and non-Conformists in England rather than members of the Church of England
      b) Here an obvious factor was that many such men turned to business because careers in the state and army were closed to them in England

F. There is also a growing body of literature about the role of the
Jews in industrialization

1. The German scholar, Werner Sombart, who wrote in the late nineteenth and early twentieth centuries, saw them as essential to modern capitalism.

2. But his theories have been much criticized, partly because they partook of anti-Semitic stereotypes about Jews and money, Jews and greed, Jews and exploitation, etc.
   a) And clearly many Jews, especially in Eastern Europe, remained very poor, did not succeed as capitalists.

G. Yet, finally, it is probably significant that the Protestant areas of Europe were on the whole the ones to industrialize first and fastest.

H. Similarly, Jews did participate to a disproportionate degree in at least certain aspects of industrial society and generally did prosper disproportionately under capitalism.
   1. But Jews were relatively small in number in the areas where capitalism did best, that is northwestern Europe.
      a) The overwhelming majority of Jews lived in eastern Europe, where capitalism remained weak until the end of the nineteenth century.

I. Finally, the most that one can say is that religion was only a part of a cluster or nexus of other factors, ones that are difficult to untangle.

J. But the one thing that does stand out: the importance of psychological or intellectual change (however it occurred—which remains somewhat mysterious and ill-explained).
   1. The belief in limitless profit, individual advancement, upward mobility, the "utility" of hard work and saving.
   2. Until people are thinking in this way, industrialization is virtually impossible.

VII. The need for inequality

A. Again, this is a paradoxical way of stating it—and a subtle, elusive matter, one only recently appreciated, but related intimately to the "awakening of greed".
   1. Both of these factors point to the reasons that industrialization is distrusted or reviled by many
B. The underlying argument: The "role model" of those who have become rich, especially of those who have gotten rich quickly, is an essential stimulus to the rest of society
   1. That model awakens “greed” or ambition in the population and persuades many of them that their individual condition, too, can change

C. A contrasting perspective may make this clearer: In a society of reasonably satisfied equals it is much more difficult to motivate people
   1. This “motivation” has to do both with working extra hard to get rich and to do unpleasant, unfamiliar jobs
   2. A dynamic society initially thus needs a large body of poor people, even desperately poor ones
   3. They can be persuaded to do the “unpleasant” labor in the factories, building railroads, etc.
      a) If they are satisfied with their traditional lives, if they are, for example, peasants with adequate plots of land and satisfactory amounts of food, they will not go to the factories to work
      b) Yet, on the other hand, the poor have to be paid enough to provide effective demand for mass-produced goods
      c) “A powerful demand for cheap goods, mass produced, is a prerequisite for the beginnings of industrialism” (Chambers, 648)

D. Inequality is also necessary because some have to have enough wealth to provide for capital investment over consumption
   1. And of course they have to be not only wealthy but convinced of the wisdom or desirability of investing in industrial production
   2. Investment in land, for example, does not help in generating industrialization (this is common problem; it was problem in France in the 18th and 19th centuries)

E. Summary: A society of equals, especially where it is an equality of reasonable affluence and where tradition is strong, will be unlikely to industrialize

VIII. The model of Britain

A. Britain was the first and thus of course has shown the way
1. It has been intensely studied

B. And it did enjoy the advantages, or prerequisites mentioned above

   1. English society was notable unequal
      a) Greed had been notably awakened
      b) There were growing numbers of desperately poor people
   2. Enough surplus existed for investment (wealth had notably expanded in 18\textsuperscript{th} century, with colonial holdings, slave trade, etc.)

C. And England enjoyed a number of other important advantages:

   1. Geographical: Being an island with many rivers, no important mountain chains (which divided countries like Italy or Spain, making internal trade and communication more difficult)
   2. Raw materials: England had, or had easy access to many of the raw materials that were essential to early industrialization: cotton, coal, iron, etc.
   3. No internal tariffs: Unlike France before 1789, England was already free of internal tariffs
   4. Credit institutions: England had well developed credit institutions: a central bank, etc.
   5. Stable, unified government: England had a stable, relatively unified government (unlike many continental countries)

D. The agricultural revolution in England

   1. The so-called “agricultural revolution” in England blended into or contributed to many of the above factors
   2. For example, the efficiency and high productivity of English agriculture meant that food prices were relatively low (especially after 1760)
      a) That allowed for an effective demand for other items of consumption—bonnets and toys, razor blades and shoes, etc.—stimulating entrepreneurial activity in those areas
   3. Relatedly, the high productivity of the countryside meant that cities could grow and be fed adequately
   4. A Key and interesting (if also controversial) aspect of the
agricultural revolution: the Enclosure Movement

a) This entailed fencing off or hedging off tracts of land to be managed more efficiently, more capitalistically

b) That in turn meant raising productivity for sale on the market—and ever-increasing profits

c) It also meant that many who worked the land were pushed off of it

d) However, this happened only in the long run, since for a while the new agricultural techniques actually absorbed slightly more workers

E. Rapidly growing population

1. This growth links up to the movement of people off of the land, into the cities

2. And this was a relatively mobile population, unlike the peasants attached to their land

F. In sum: Britain enjoyed an extraordinary mesh of conditions, almost as if favored by God (loving? playful? cruel?), to allow the country to industrialize ahead of others

1. A key point: The inventions, the obvious, outward signs of industrialization, were finally less important than this more subtle and not immediately obvious mesh of psychological predisposition, credit institutions and available capital, sufficient labor market, geography, etc.

IX. The accomplishments of industrialization

A. We get back here to the issue of the optimists and pessimists

B. Was the price paid for industrialization really worth it?

C. Much of the debate on this for long centered around the issue of the material condition of the working class—"the standard of living debate"

D. Early contrasting viewpoints

1. Many contemporaries in the late 18th and early 19th centuries ardently believed that the "factory system" was a total, unmitigated disaster

   a) For them, it would have been better if industrialization had never occurred

2. Others at the time were just as persuaded that it was a great blessing
a) Many of them even defended such things as child labor in the factories

b) It supposedly kept children out of trouble, made them productive, taught them good work habits (even if it did mean keeping children under 10 years of age at work for often 12, 14 hours a day)

E. Modern debates

1. From the extremes of the early debates on industrialization has emerged a more sophisticated exchange

2. As noted, the pessimists have had to recognize the ample evidence for the rising incomes of the lower classes in the course of the nineteenth century

3. They have recognized as well the terrible conditions of the countryside (and the tendency earlier to romanticize them) before industrialization

4. The pessimists have subsequently concentrated more on non-material factors
   a) the suffering caused by a break with the past, with traditions, etc.

   b) relatedly: the aesthetic-moral issues (ones that the earliest critics also emphasized)

   c) In other words, the creations of industrialism are ugly (factory buildings, railroads, new industrial slums, etc.)

   d) Similarly, there was a “rape” of the land, a violation of nature (cf. to modern ecological concerns)—pollution of waters, air, decline in craftsmanship, independence, freedom

   e) In the most general way: the pessimists have objected to a society driven by greed, acquisitiveness, egocentricity—market forces rather than "human" or "rational" considerations

   f) They view it as a society where those in power refuse to take responsibility for the vast harm caused by their money-making activities

F. Key concern: the vast increase in the productivity of labor

1. All observers now recognize that this has occurred (it was at first denied by the pessimists)
2. And all are at least inclined to recognize that without that increase even worse conditions might have resulted
   a) For all its horrors, the condition of the poor in Europe throughout the nineteenth and twentieth centuries has been better than that of the poor in much of the non-European world

3. Industrialization, thus, saved Europe from the fate of India, China, or Africa
   a) In these areas millions have died from outright starvation in a single year, and they suffer from other vulnerabilities to disease, disasters of weather, etc.
   b) Even today, the vast majority of the population in these areas continues to live at levels of material want and general misery scarcely imagined in Europe

G. But such a consensus has nevertheless not quieted some more demanding questions, of lasting interest to those who have followed England, especially in the Third World
   1. Was the exact path forged by England really the only possible one?
   2. Might industrialization have been better managed—not only more “rationally” but more humanely?
   3. Might it have been possible to preserve more of the sense of human solidarity, sympathy for the poor, and respect for tradition?

H. I will turn to these questions in the next lecture: They are central to the history of socialism in Europe