Hard Times – Dickens

Excerpt Describing Coketown, from

Chapter 5: THE KEY-NOTE

... Let us strike the key-note, Coketown, before pursuing our tune.

    It was a town of red brick, or of brick that would have been red if the smoke and ashes had allowed it; but as matters stood, it was a town of unnatural red and black like the painted face of a savage.  It was a town of machinery and tall chimneys, out of which interminable serpents of smoke trailed themselves for ever and ever, and never got uncoiled.  It had a black canal in it, and a river that ran purple with ill-smelling dye, and vast piles of building full of windows where there was a rattling and a trembling all day long, and where the piston of the steam-engine worked monotonously up and down, like the head of an elephant in a state of melancholy madness.  It contained several large streets all very like one another, and many small streets still more like one another, inhabited by people equally like one another, who all went in and out at the same hours, with the same sound upon the same pavements, to do the same work, and to whom every day was the same as yesterday and to-morrow, and every year the counterpart of the last and the next.

    These attributes of Coketown were in the main inseparable from the work by which it was sustained; against them were to be set off, comforts of life which found their way all over the world, and elegancies of life which made, we will not ask how much of the fine lady, who could scarcely bear to hear the place mentioned.  The rest of its features were voluntary, and they were these.

    You saw nothing in Coketown but what was severely workful.  If the members of a religious persuasion built a chapel there - as the members of eighteen religious persuasions had done - they made it a pious warehouse of red brick, with sometimes (but this is only in highly ornamental examples) a bell in a birdcage on the top of it.  The solitary exception was the New Church; a stuccoed edifice with a square steeple over the door, terminating in four short pinnacles like florid wooden legs. All the public inscriptions in the town were painted alike, in severe characters of black and white.  The jail might have been the infirmary, the infirmary might have been the jail, the town-hall might have been either, or both, or anything else, for anything that appeared to the contrary in the graces of their construction.  Fact, fact, fact, everywhere in the material aspect of the town; fact, fact, fact,
everywhere in the immaterial.  The M'Choakumchild school was all fact, and the school of design was all fact, and the relations between master and man were all fact, and everything was fact between the lying-in hospital and the cemetery, and what you couldn't state in figures, or show to be purchaseable in the cheapest market and saleable in the dearest, was not, and never should be, world without end, Amen

**Women Miners in the English Coal Pits**

From Great Britain, *Parliamentary Papers*, 1842, VoL XVI, pp. 24, 196.

In England, exclusive of Wales, it is only in some of the colliery districts of Yorkshire and Lancashire that female Children of tender age and young and adult women are allowed to descend into the coal mines and regularly to perform the same kinds of underground work, and to work for the same number of hours, as boys and men; but in the East of Scotland their employment in the pits is general; and in South Wales it is not uncommon.

*West Riding of Yorkshire: Southern Part* - In many of the collieries in this district, as far as relates to the underground employment, there is no distinction of sex, but the labour is distributed indifferently among both sexes, except that it is comparatively rare for the women to hew or get the coals, although there are numerous instances in which they regularly perform even this work. In great numbers of the coalpits in this district the men work in a state of perfect nakedness, and are in this state assisted in their labour by females of all ages, from girls of six years old to women of twenty-one, these females being themselves quite naked down to the waist.

"Girls," says the Sub-Commissioner [J. C. Symons], -regularly perform all the various offices of trapping, hurrying [Yorkshire terms for drawing the loaded coal corves], filling, riddling,tipping, and occasionally getting, just as they are performed by boys. One of the most disgusting sights 1 have ever seen was that of young females, dressed like boys in trousers, crawling on all fours, with belts round their waists and chains passing between their legs, at day pits at Hunshelf Bank, and in many small pits near Holmfirth and New Mills: it exists also in several other places. 1 visited the Hunshelf Colliery on the 18th of January: it is a day pit; that is, there is no shaft or descent; the gate or entrance is at the side of a bank, and nearly horizontal. The gate was not more than a yard high, and in some places not above 2 feet.

" When I arrived at the board or workings of the pit I found at one of the sideboards down a narrow passage a girl of fourteen years of age in boy's clothes, picking down the coal with the regular pick used by the men. She was half sitting half lying at her work, and said she found it tired her very much, and 'of course she didn't like it.' The place where she was at work was not 2 feet high. Further on were men lying on their sides and getting. No less than six girls out of eighteen men and children are employed in this pit.

"Whilst I was in the pit the Rev Mr Bruce, of Wadsley, and the Rev Mr Nelson, of Rotherham, who accompanied me, and remained outside, saw another girl of ten years of age, also dressed in boy's clothes, who was employed in hurrying, and these gentlemen saw her at work. She was a nice-looking little child, but of course as black as a tinker, and with a little necklace round her throat.

"In two other pits in the Huddersfield Union I have seen the same sight. In one near New Mills, the chain, passing high up between the legs of two of these girls, had worn large holes in their trousers; and any sight more disgustingly indecent or revolting can scarcely be imagined than these girls at work-no brothel can beat it.

"On descending Messrs Hopwood's pit at Barnsley, I found assembled round a fire a group of men, boys, and girls, some of whom were of the age of puberty; the girls as well as the boys stark naked down to the waist, their hair bound up with a tight cap, and trousers supported by their hips. (At Silkstone and at Flockton they work in their shifts and trousers.) Their sex was recognizable only by their breasts, and some little difficulty occasionally arose in pointing out to me which were girls and which were boys, and which caused a good deal of laughing and joking. In the Flockton and Thornhill pits the system is even more indecent: for though the girls are clothed, at least three-fourths of the men for whom they "hurry" work stark *naked, or* with a flannel waistcoat only, and in this state they assist one another to fill the corves 18 or 20 times a day: I have seen this done myself frequently.

"When it is remembered that these girls hurry chiefly for men who are not their parents; that they go from 15 to 20 times a day into a dark chamber (the bank face), which is often 50 yards apart from any one, to a man working naked, or next to naked, it is not to be supposed but that where opportunity thus prevails sexual vices are of common occurrence. Add to this the free intercourse, and the rendezvous at the shaft or bullstake, where the corves are brought, and consider the language to which the young ear is habituated, the absence of religious instruction, and the early age at which contamination begins, and you will have before you, in the coal-pits where females are employed, the picture of a nursery for juvenile vice which you will go far and we above ground to equal."

**Two Women Miners**

From Great Britain, *Parliamentary Papers*, 1842, Vol. XV, p. 84, and ibid., Vol. XVII, p. 108.

***Betty Harris****,* age 37: I was married at 23, and went into a colliery when I was married. I used to weave when about 12 years old; can neither read nor write. I work for Andrew Knowles, of Little Bolton (Lancs), and make sometimes 7s a week, sometimes not so much. I am a drawer, and work from 6 in the morning to 6 at night. Stop about an hour at noon to eat my dinner; have bread and butter for dinner; I get no drink. I have two children, but they are too young to work. I worked at drawing when I was in the family way. I know a woman who has gone home and washed herself, taken to her bed, delivered of a child, and gone to work again under the week.

I have a belt round my waist, and a chain passing between my legs, and I go on my hands and feet. The road is very steep, and we have to hold by a rope; and when there is no rope, by anything we can catch hold of. There are six women and about six boys and girls in the pit I work in; it is very hard work for a woman. The pit is very wet where I work, and the water comes over our clog-tops always, and I have seen it up to my thighs; it rains in at the roof terribly. My clothes are wet through almost all day long. I never was ill in my life, but when I was lying in.

My cousin looks after my children in the day time. I am very tired when I get home at night; I fall asleep sometimes before I get washed. I am not so strong as I was, and cannot stand my work so well as I used to. I have drawn till I have bathe skin off me; the belt and chain is worse when we are in the family way. My feller (husband) has beaten me many a times for not being ready. I were not used to it at first, and he had little patience.

I have known many a man beat his drawer. I have known men take liberties with the drawers, and some of the women have bastards.

***Patience Kershaw****,* age 17, Halifax: I go to pit at 5 o'clock in the morning and come out at 5 in the evening; I get my breakfast, porridge and milk, first; I take my dinner with me, a cake, and eat it as I go; I do not stop or rest at any time for the purpose, I get nothing else until I get home, and then have potatoes and meat, not every day meat.

Coal and the Industrial Revolution

As of 1860, the United States was an industrial laggard. Great Britain, France, and Germany each produced more goods than their transatlantic counterpart. By 1900, however, U.S. industrial production exceeded "the combined manufacture of its three main rivals." Why, and with what consequences?

**Rise of Fossil Fuels**

Most textbooks provide at least a few glimpses of the transformation of the U.S. into a fossil-fueled nation: a photo of child laborers outside a Pennsylvania coal mine, a statistic on rising coal production, perhaps a brief mention of the Ludlow Massacre of 1914 (in which Colorado National Guardsmen killed 18 men, women, and children during a miners' strike in southern Colorado). Aside from these disconnected tidbits, though, textbooks offer little insight into the profound historical significance of energy, nor do they provide a coherent interpretation of what the adoption of fossil fuels portended for the nation's economy and environment.

Well into the 1800s, the American economy was almost exclusively an organic economy, one in which people met their needs by harvesting energy and materials from the earth's surface ecosystems. Food, fuel, shelter, motive power, clothing, and virtually every other necessity of life—Americans obtained all of these from plants, animals, falling rivers, and blowing winds. The growth potential of organic economies remained sharply constrained by the limited ability of people to tap into the sun's energy through farms, windmills, waterwheels, and the like.

*Fossil fuels essentially enabled Americans to harness the power of ancient suns.*

By contrast, the new form of mineral-intensive economy pioneered in Britain during the late 1700s, and imitated in the U.S. and beyond in the centuries since, encountered no such limits. Instead of drawing upon limited flows of energy through surface ecosystems, mineral-intensive economies accessed much greater supplies of energy by extracting ancient stocks of energy from beneath the earth in the form of coal, petroleum, and natural gas. Fossil fuels essentially enabled Americans to harness the power of ancient suns. Coal-powered technologies magnified the strength, stamina, and precision of American workers, making the U.S. labor force the most productive in the world.

**Textbook Coverage**

Textbook discussions of American industrialization often begin with New England's water-powered textile mills. By the 1830s, though, large-scale coal extraction had begun in Pennsylvania, Virginia, and beyond. Northern railroads and factories took the lead in replacing wood and water power with coal. By the 1860s, booming northern coal mines—the Union produced 38 times more coal than the Confederacy—and the war industries they fueled helped to give the Union a decisive material advantage.

*Railroads and steamships burned vast quantities of coal, but they also hauled it to other consumers.*

By the 1890s, the coal industry stretched from the Appalachian Mountains, across the Midwestern prairies, to the Cascades and Rockies, making the U.S. the largest coal producer in the world. More than 750,000 coal miners of every race and more than three dozen nationalities were digging and blasting upwards of 550 million tons of coal a year by the 1910s (a volume sufficient to cover the entire island of Manhattan with more than 21 feet of coal) (see Primary Source Coal Consumption ([1850-1900]).

Where did the vast quantities of fossil fuel go? What changes did fossil fuels produce? Railroads and steamships burned vast quantities of coal, but they also hauled it to other consumers. Most major American industries—steel mills, textile factories, and so forth—thereafter began to use immense amounts of coal, either directly in steam engines and furnaces, or indirectly via electricity produced in coal-burning generating stations.

**Environmental Costs**

America's industrial ascendancy was an unmitigated disaster for the environment. In the countryside, coal-burning machines such as steam shovels, tractors, and dredges ripped into the earth, yielding short-term profits at the expense of soil erosion and other long-term problems. Cities and towns, meanwhile, were becoming notoriously polluted by fossil-fueled railroads, industries, and homes (see Primary Source Cincinnati Account [1841] and Primary Source Pittsburgh Painting [1843]).

Coal's impact was particularly dramatic in the industrial sector, but fossil fuels were also changing people's domestic lives in important ways. Start with the electric- or cable-powered streetcars that Americans increasingly used to travel between work, home, downtown shopping districts, and peripheral amusement grounds.

*Gas and electricity helped keep the homes of elite Americans clean, warm, and bright.*

Then move to the houses and apartments in which Americans increasingly used coal for cooking and heating. Poorer folks were compelled to buy cheaper, dirtier coal, which they consumed directly, and wealthier folks increasingly enjoyed the benefits of coal-derived manufactured gas and electricity. Gas and electricity helped keep the homes of elite Americans clean, warm, and bright; at the same time, they fostered a dream of modern domesticity in which gas stoves, light bulbs, phonographs, telephones, radios, and other devices and appliances labored to cook, enlighten, entertain, and communicate. Yet the pipes and wires responsible for transmitting gas and electricity led back to plants and stations that polluted industrial districts and adjoining working-class neighborhoods.

**Human Costs**

In this and other ways, working-class Americans of all races suffered disproportionate burdens in the new mineral-intensive economy. Fossil-fueled machines operated by unskilled or semi-skilled newcomers displaced skilled workers in many industries (with coal mining an ironic exception). Working people exerted less control over production than ever before; American labor leaders increasingly decried the degradation of work as all sorts of time-honored trades and occupations became obsolete.

The coal-powered economy brought to bear much more energy than existing technologies could easily control. Many jobs consequently became exceedingly hazardous. By the early 20th century, tens of thousands of workers were dying every year on the railroads, in factories, and especially in coal mines, including many boys and adolescents (see Primary Source Jokerville Coal Mine Explosion [1844] and Primary Source Breaker Boys at Work [1911]). For each laborer killed directly, several were maimed, and several more found their lives shortened by coal dust, lead, and other poisons.

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Theoretically, workers should have earned higher wages as they became more productive. In reality, most employers resisted worker demands for higher pay, shorter hours, and better conditions with every tool at their disposal, including violence. Historian Walter Licht has identified "a direct connection between coal, mass industry, and the rise of the bureaucratic corporation." No less direct a connection, however, linked mineral-intensive industrialization, labor conflict, and progressive reform.

**Government Response**

Coal-miners engaged in strikes more frequently than any other American workers. Because of this tradition of labor activism and the public concern it generated—concern amplified by the widespread though rarely articulated recognition that the nation had become utterly dependent on the coal that miners unearthed—the coal industry prompted heated public debates by the early 20th century and, eventually, a spate of new regulations and institutions.

*Both the vast new power and the vast new wealth Roosevelt decried traced their origins to coal.*

Teddy Roosevelt, who had a front-row seat in these developments, described the birth of a new American state that broke significantly from its laissez-faire precursor: "The development of industrialism means that there must be an increase in the supervision exercised by the Government over business enterprise. . . .Neither this people nor any other free people will permanently tolerate the use of the vast power conferred by vast wealth without lodging somewhere in the government the still higher power of seeing that this power is used for and not against the interests of the people as a whole."

Both the vast new power and the vast new wealth Roosevelt decried traced their origins to coal. More than 100 years later, students need to learn that the dilemmas of our own fossil-fueled society have deeper roots than history textbooks manage to convey.

## Coal Consumption (1850-1900)

#### Annotation

*This graph, developed in 2003, shows the speed with which coal, particularly bituminous coal, took over as the central American energy source at the end of the 20th century.*

#### Primary Source(s)



Citation

Schurr, Sam H. and Bruce C. Netschert. [Energy in the American Economy, 1850-1975](http://openlibrary.org/b/OL5800917M/Energy_in_the_American_economy_1850-1975). Baltimore: Johns Hopkins, 1960, 36-37.

## Cincinnati Account (1841)

#### Annotation

*After collecting data for the 1840 census in Cincinnati, Charles Cist used the information he had gathered to write a book on the city—which included, among chapters on the area's geology, commerce, and education systems, this description of city pollution. The full text of the book may be read* [*online*](http://openlibrary.org/b/OL23355233M/Cincinnati_in_1841)*.*

#### Primary Source(s)

A dense cloud of darkness and smoke, visible for some distance before [a traveler] reaches it, hides the city from his eyes until he is in its midst; and yet half the volume is furnished by household fires, coal being the only fuel of the place. As he enters the manufacturing region, the hissing of steam, the clanking of chains, the jarring and grinding of wheels and other machinery, and the glow of melted glass and iron, and burning coal beneath, burst upon his eyes and ears in concentrated force. If he visits the warehouses he finds glass, cotton yarns, iron, nails, castings, and machinery, occupying a prominent place. He discovers the whole city under the influence of steam and smoke. The surface of the houses and streets are so discolored as to defy the cleansing power of water, and the dwellings are preserved in any degree of neatness, only by the unremitting labors of their tenants, in morning and evening ablutions. The very soot partakes of the bituminous character of the coal, and falling—color excepted—like snow flakes, fastens on the face and neck, with a tenacity which nothing but the united agency of soap, hot water, and the towel can overcome. Coal and the steam-engine are the pervading influence of the place. . . . It is, in industry, a perfect hive—and without drones.

**The Jungle, Chapter 5 (excerpt)**

All of these were sinister incidents; but they were trifles compared to what Jurgis saw with his own eyes before long. One curious thing he had noticed, the very first day, in his profession of shoveler of guts; which was the sharp trick of the floor bosses whenever there chanced to come a **"slunk" calf**. Any man who knows anything about butchering knows that the flesh of a cow that is about to calve, or has just calved, is **not fit for food**. A good many of these came every day to the packing houses – and, of course, if they had chosen, it would have been an easy matter for the packers to keep them till they were fit for food. But for the saving of time and fodder, it was the law that cows of that sort came along with the others, and whoever noticed it would tell the boss, and the boss would start up a conversation with the government inspector, and the two would stroll away. So in a trice the carcass of the cow would be cleaned out, and entrails would have vanished; it was Jurgis' task to slide them into the trap, calves and all, and on the floor below they took out these "slunk" calves, and butchered them for meat, and used even the skins of them.

One day a man slipped and hurt his leg; and that afternoon, when the last of the cattle had been disposed of, and the men were leaving, Jurgis was ordered to remain and do some special work which this injured man had usually done. It was late, almost dark, and the **government inspectors had all gone**, and there were only a dozen or two of men on the floor. That day they had killed about four thousand cattle, and these cattle had come in freight trains from far states, and some of them had got hurt. There were some with broken legs, and some with gored sides; there were some that **had died**, from what cause no one could say; and they were all to be disposed of, here in darkness and silence. **"Downers,"** the men called them; and the packing house had a special elevator upon which they were raised to the killing beds, where the gang proceeded to handle them, with an air of businesslike nonchalance which said plainer than any words that it was a matter of everyday routine. It took a couple of hours to get them out of the way, and in the end Jurgis saw them go into the chilling rooms with the rest of the meat, being carefully **scattered here and there so that they could not be identified**. When he came home that night he was in a very somber mood, having begun to see at last how those might be right who had laughed at him for his faith in America.

**The Jungle, Chapter 14 (excerpt)**

With one member trimming beef in a cannery, and another working in a sausage factory, the family had a first-hand knowledge of the great majority of Packingtown swindles. For it was the custom, as they found, **whenever meat was so spoiled that it could not be used for anything else, either to can it or else to chop it up into sausage**. With what had been told them by Jonas, who had worked in the pickle rooms, they could now study the whole of the spoiled-meat industry on the inside, and read a new and grim meaning into that old Packingtown jest – that they use everything of the pig except the squeal.

Jonas had told them how the meat that was taken out of pickle would often be found sour, and how they would rub it up with soda to take away the smell, and sell it to be eaten on free-lunch counters; also of all the miracles of chemistry which they performed, giving to any sort of meat, fresh or salted, whole or chopped, any color and any flavor and any odor they chose. In the pickling of hams they had an ingenious apparatus, by which they saved time and increased the capacity of the plant – a machine consisting of a hollow needle attached to a pump; by plunging this needle into the meat and working with his foot, a man could fill a ham with pickle in a few seconds. And yet, in spite of this, there would be hams found spoiled, some of them with an **odor so bad** that a man could hardly bear to be in the room with them. To pump into these the packers had a second and much stronger pickle which destroyed the odor – a process known to the workers as "giving them thirty per cent." Also, after the hams had been smoked, there would be found **some that had gone to the bad**. Formerly these had been sold as "Number Three Grade," but later on some ingenious person had hit upon a new device, and now they would extract the bone, about which the bad part generally lay, and insert in the hole a white-hot iron. After this invention there was no longer Number One, Two, and Three Grade – there **was only Number One Grade**. The packers were always originating such schemes – they had what they called "boneless hams," which were all the odds and ends of pork stuffed into casings; and "California hams," which were the shoulders, with big knuckle joints, and nearly all the meat cut out; and fancy "skinned hams," which were made of the **oldest hogs**, whose skins were so heavy and coarse that no one would buy them – that is, until they had been cooked and chopped fine and labeled "head cheese!"

It was only when the whole ham was spoiled that it came into the department of Elzbieta. Cut up by the two-thousand-revolutions- a-minute flyers, and mixed with half a ton of other meat, no odor that ever was in a ham could make any difference. There was never the least attention paid to what was cut up for sausage; there would come all the way **back from Europe** old sausage that had been rejected, and that was **moldy** and white – it would be dosed with borax and glycerine, and dumped into the hoppers, and made over again for home consumption. There would be meat that had tumbled out on the floor, in the dirt and sawdust, where the workers had tramped and spit uncounted billions of consumption germs. There would be meat stored in great piles in rooms; and the water from leaky roofs would drip over it, and thousands of **rats would race** about on it. It was too dark in these storage places to see well, but a man could run his hand over these piles of meat and sweep off handfuls of the dried dung of rats. These **rats were nuisances**, and the packers would put **poisoned bread out for them; they would die, and then rats, bread, and meat would go into the hoppers together**. This is no fairy story and no joke; the meat would be shoveled into carts, and the man who did the shoveling **would not trouble to lift out a rat** even when he saw one – there were things that **went into the sausage in comparison with which a poisoned rat was a tidbit**. There was no place for the men to wash their hands before they ate their dinner, and so they made a practice of washing them in the water that was to be ladled into the sausage. There were the butt-ends of smoked meat, and the scraps of corned beef, and all the odds and ends of the waste of the plants, that would be dumped into old barrels in the cellar and left there. Under the system of rigid economy which the packers enforced, there were some jobs that it only paid to do once in a long time, and among these was the cleaning out of the waste barrels. Every spring they did it; and in the barrels would be dirt and rust and old nails and stale water – and cartload after cartload of it would be taken up and dumped into the hoppers with fresh meat, and sent out to the public's breakfast. Some of it they would make into "smoked" sausage – but as the smoking took time, and was therefore expensive, they would call upon their chemistry department, and preserve it with borax and color it with **gelatine to make it brown**. All of their sausage came out of the same bowl, but when they came to wrap it they would stamp some of it "special," and for this they would charge two cents more a pound.