

An Analysis of ENVIRONMENTAL ISSUES in 19th Century England Using the Writings of CHARLES DICKENS

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If you were to ask your students what century is best known for its environmental and social problems, what would they say? Most likely, they would say “The 21st century.” This is true; however, there is another century worth examining when environmental issues affected societies. Charles Dickens lived during the best and worst of times in 19th century England. His writings were greatly influenced by the ongoing industrial revolution. He described abhorrent environmental conditions, inadequate sanitary practices, child abuse, and other social maladies of the times. But, wait . . . why should we bring Dickens into the biology classroom?

“Fiction dealing with our environment can strengthen and broaden the real-life experiences of a child” (Powers, 1974, p. 16). By having Dickens in the biology classroom, our students can discover that pollution, child abuse, infectious diseases, and poor sanitary practices are not just 21st century problems:

If students are stimulated by interesting past events, they could also study scenarios of future social patterns and values to initiate student interest in socialization.

Reynolds, 1983, p. 407

Dickens’ readings provide students with the opportunity to discuss such issues as: Will people continue to make the same mistakes in the future as they did in the past? How can people avoid the mistakes? What role will humanitarian causes play in making societal decisions? Dickens’ writings can initiate discussions, debates, role-plays, and essays dealing with people vs. technology, nature vs. technology, and people vs. nature, among other topics (Fleener & Bucher, 2003).

Dickens & the Environment

When you discuss environmental issues (such as pollution, sanitation, infectious diseases, and housing conditions), provide your students with any of the following excerpts from Dickens’ writings. In the following paragraph from *Hard Times*, Dickens describes the pollution of Coketown:

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 buildings full of windows where there was a ratline and trembling all day long.

Dickens, 1959, p. 34

The effects of air pollution in London are described in *Our Mutual Friend*, by writing “Animate London, with smarting eyes and irritated lungs, was blinking, wheezing and choking; inanimate London was snooting spectre” (Dickens, 1964, p. 21).

Dickens discussed sanitation issues frequently in his writings. He served as a reporter for the *True Sun* and then the *Morning Chronicle*. During this time, he became familiar with the legislation focusing on the poor. Edwin Chadwick was the Secretary to the Poor Law Commission. In 1834, all 15,000 parishes in England were responsible for looking after their own poor. No single system existed. The Poor Law Report of 1834 barely mentioned sanitary conditions and water quality found in the poorest areas of England. Dickens did not support the new Poor Law and became cynical about the politics in his country. In *Bleak House*, he wrote:

Now, these tumbling tenements contain, by night, a swarm of misery. As on the ruined human wretch, vermin parasites appear, so these ruined shelters have bred a crowd of foul existence that crawls in and out of gaps in walls and boards: and coils itself to sleep, in maggot numbers, where the rain drips in; and comes and goes, fetching and carrying fever, and sowing more evil in its every footprint than Lord Coodle, and Sir Thomas Doodle, and The Duke of Foodle, and all the fine gentlemen in office, down to Zoodle, shall set right in five hundred year—though born expressly to do it.

Dickens 1852-53, p. 259

At the time of this writing, Dickens became totally committed to sanitary conditions, especially among the poor. Since his childhood was marred with poverty after his father went to debtor’s prison, he was dedicated to improving the conditions of the poor. Daniel Webster said of Dickens that his social crusades did more for the English poor than all the politicians, physicians, and statesmen (Pomeranz, 1963).

The conditions of London in 1844 were such that the Metropolitan Sewers Commission found thousands of houses with no drainage at all. But it wasn’t until six years later that Parliament even considered the issues of sanitation and health conditions. In *Household Words*, Dickens described a neighborhood where “. . . when there is a fire the water is turned on thus flows of necessity an extra supply out of the tapes in courts and alleys and the people exclaim ‘Thank God, there is a fire; we will get some water now!’” (Pomeranz, 1963, p. 38). The people in tenement housing finally had water, but unfortunately they were drinking water with a high lead content. Their landlords refused to alter the pumps. In *Little Dorrit*, Dickens relays a less-than-favorable attitude

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toward a tenant house landlord and the conditions many poor were forced to live:

. . . Does he (landlord) ever think of Slaughterhouse Court; where the filthy houses he lets and persists in letting and in conniving at sub-letting and in refusing to improve, so that they are noisome, so infected, so hideous that the swallows will not sit on the eaves to sun themselves; that the shrewd starlings avoid the place with a sidelong cock-eyed glance of aversion? What live things could thrive in Slaughterhouse Court save obscene rats?

Pomeranz, 1963, p. 84

Finally, in *Household Words*, Dickens denounced the housing and sanitation problems by writing:

I saw a poisoned air in which life drooped. I saw disease arrayed in all its store of hideous aspects and appalling shapes, triumphant in every alley, by-way, court, back-street, and poor abode. . . . I saw innumerable hosts foredoomed to darkness, dirt and pestilence and obscenity, misery and early death.

Pomeranz, 1963, p. 148

As a result of the inhumane housing and sanitation conditions, cholera ran rampant throughout early 19th century. In fact, 54,547 deaths were due to cholera in England during the 1831-32 season. Little was known at the time about cholera, influenza, and typhus. The London epidemics prompted Chadwick to inquire about these fevers from three well-known physicians at the time. One of the physicians was Southwood Smith and it was his report that impacted Chadwick's thoughts the most. Smith's ideas about the etiology of the fevers were developed in the 1820s by reviewing the literature and through his work at the London Fever Hospital (Poynter, 1962). He brought these together in *His Treatise on Fever* (1830). In his treatise, he wrote:

The room of a fever patient, in a small and heated apartment of London, with no perfusion of fresh air, is perfectly analogous to a stagnant pool in Ethiopia full of the dead bodies of dead locusts. The poison generated in both cases is the same; the difference is merely in the degree of potency.

Despite Southwood's report, little action was taken to address public health issues. In order to keep the subject alive, Chadwick composed a report, *The Sanitary Condition of the Labouring Population of Great Britain*, which became a best seller and influenced changes to be made.

The graveyards of the metropolis presented more problems. In a mere 250 acres, over 1.5 million people were buried in just 30 years (Pomeranz, 1963). The poor lived in the most unsanitary conditions, providing a perfect environment for cholera and other diseases to spread easily through the tenements.

Dickens' portrait of the environmental issues facing England during the 1800s points to numerous problems with how the issues were addressed, the suffering of the poor, and the lack of understanding of the issues at hand. Can this be compared to our environmental issues of today, such as global warming, mass starvation, air and water pollution, and public health safety?

Dickens & the Plight of Children

In a number of Dickens' books, children were the main characters who endured many hardships. Dickens was greatly influenced by an accident in his own childhood. For his first 12 years, Dickens led a very enriched life, including trips to

Christmas pantomimes, visiting his father at the shipyards, and reading voluminous amounts of books in his attic. His father enjoyed the "good life" and accumulated a vast amount of debt. When his father was sent to debtor's prison, Dickens was forced to work at a blackbooting warehouse surrounded by disadvantaged boys in ragged clothes.

The memories of working in the blacking factory remained with Dickens his entire life and were reflected in his many writings. His obsession with the abuse of children in the workforce surfaced in *Oliver Twist*, *David Copperfield*, and various other writings.

Childhood, according to Dickens' writing, was a long time filled with agony, abuse, and suffering. Dickens felt it was a crime against children to rob them of their childhood. Pauper children in London worked 14 to 16 hours a day in the mills and the mines. These children committed suicide at eight, nine, or ten years of age by the hundreds. In the charity schools (like orphanages), the children died due to malnutrition, extreme punishment, and illness. In one school, 10,000 children died out of 14,000. The mortality for a Dublin school was 80% (Pomeranz, 1963).

In *Oliver Twist*, Dickens discusses the plight of the chimney sweep. Boys as young as six years old were forced to be chimney sweeps because of their small stature. As a consequence, they were some of the earliest victims diagnosed with chemical carcinogenesis. They contracted scrotal cancer from their repeated exposure to coal combustion by-products. Benzo(a)pyrene is known to be responsible for modifications in the structure of DNA and RNA, thus causing cancer (Labiance, 1984). In addition, it was not uncommon for fires to be lit in the chimneys under these children to bring them out of the chimney faster.

Being a mud lark was another job forced upon children and the elderly. The mud larks scavenged for bits of iron, coal, and copper nails in the London river. With the raw sewage, diseases, industrial waste, and other vermin present in the river, no one else would take on such filthy work for so poor a return (Tomlin, 1969).

Life in the coal mines was equally appalling for children. From the ages of four to nine, boys and girls were harnessed to little trucks of coal that they drew in a crouching position through the low passages to the larger openings. The children were unable to build resistance to any disease since they were deprived of fresh air and sunshine. These children could not clean themselves of the coal dust embedded in their scalps and skin (Adrian, 1984).

Other children worked at home right beside their parents. Since they were small and able to crawl under machinery, they were used as piecers. At the end of a shift, the children were so tired that they got caught in unfenced machinery. Pulmonary lung disease developed in the children because they were constantly breathing lint-clogged air (Adrian, 1984).

Dickens was also very concerned about the nutritional needs of children. In *Oliver Twist*, Dickens relays the vile treatment of the "baby farms" where children die due to indifference to nutrition and sanitation:

For the next eight or ten months Oliver was the victim of a systematic course of treachery and deception. He was brought up by hand. The hungry and destitute situation of the infant orphan was duly reported by the workhouse authorities to the parish authorities. . . . Oliver should be "farmed," or, in other words that he should be dispatched to

a branch workhouse some three miles off, where twenty or thirty juvenile offenders against the poor laws rolled about the floor all day, without the inconvenience of too much food or too much clothing. . . . For at the very moment when a child had contrived to exist upon the smallest possible portion of the weakest possible food it did perversely happen in eight and a half cases out of ten either that it sickened from want or cold or fell into the fire from neglect, or got half smothered by accident. . . .

Pomeranz, 1963, p. 168

Infusing the 19th Century Environmental Issues into the Classroom

Students can take Dickens' writings and compare the 19th century environmental issues with ones we face today. Overpopulation, the plight of the poor, unsanitary living conditions, water pollution, air pollution, and public health issues are just a few of the common ones faced by both centuries. The following are suggestions for the classroom:

- Using illustrations found on the Internet, paint or draw a picture of Coketown, Slaughterhouse Court, or London as described by Dickens of life in Victorian England.
- Set up a town meeting where students take on the roles of various citizens trying to improve the conditions of England in the 1800s. Roles could be those of environmentalists using today's methodologies, members of a poor family, physicians, politicians, authors, owners of coal mines.
- Design hypothetical experiments that could be performed to clean the "river that ran purple with ill-smelling dye."
- Using Photoshop, design a mini-newspaper of the 19th century trying to attract attention to the deplorable conditions of the times.
- Prepare a set of solutions to the problems facing the people of the 19th century. How might these solutions be applicable to our society today? In what parts of the world are similar environmental issues present? Why are many people living in similar conditions today with all of our knowledge of medicine, sanitation, and health care?
- Predict what effect air and water pollution had on plant and animal life in England. Have the students contrast this with known effects of 21st century pollutants on the flora and fauna.
- Examine other authors for environmental messages, such as Henry David Thoreau, Wendell Berry, Gary Snyder, Rachel Carson, and William Stegner.
- Examine the work of 19th century scientists and determine how their contributions could affect the environmental issues of England. Possible scientists include Darwin, Faraday, Cuvier, Huxley, Owen, Tyndall, Davy, Pasteur, Lister, and Stephenson.
- Discuss Dickens' possible influence on the requirement of smallpox vaccination made compulsory in Britain in 1853 and the modernization of London sewers after the outbreak of cholera in 1855.
- Relate the emigration of 424,000 people from Britain to the United States during the 1850s to the environmental

conditions the people were facing. Have the students prepare a hypothetical resume or personal profile of the emigrants. Were they the affluent part of the British population?

- Compare the environmental issues of England to the United States in the 19th century.
- Compare and contrast life for children of the 19th century with today's children. How are children valued today as opposed to Dickens' day? Consider child labor laws, child poverty, and child health issues facing children around the world.
- Research the health effects on a small child of working in a coal mine, chimney, or polluted river.

Conclusion

From reading his works, Dickens was dedicated to bringing about social and environmental reforms to London:

. . . there is no doubt that he awakened the public consciousness to the need to cleanliness, decency, and humanity towards the sick, and gave impetus to the public health movement that began in Britain about that time.

Easton, 1945, p. 154

By bringing Charles Dickens into the biology classroom, we can compare a portrait of the environment in another century to the environmental issues of today. Through analysis of how environmental issues were dealt with in the 19th century, students can compare the process, the issues, and the solutions to the way environmental issues are handled today. Dickens' writings provide vivid images of a time facing major health, sanitary, and working conditions of the poor which offer an important historical and social perspective for our students.

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