

Free new energy sources essay sample

[Sociology](#), [Communication](#)



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Introduction

The Second Industrial Revolution took place from the beginning of 19th century to the 20th century. It is the continuation of the first industrial revolution, which had steam-powered machines like the mark. In the first industrial revolution, the machines replaced human labor. On the other hand, the Second Industrial Revolution signifies replacement of the steam engines developed during the first revolution with electricity driven machines.

Electricity has been developed in line with other sources of energy such as gas. The new forms of energy are useful in transportation and communication sectors since machines become extremely fast and efficient at work. Efficiency of machines at work encourages outstanding performance and large-scale growth for industries. Apart for industrialization and revolution of energy sources, social issues such as health care and living standards have been improved in an exclusive manner. Britain led the First Industrial Revolution while the United States and Germany drove the Second Industrial Revolution since they were the leading global economies.

Technology is evident during the period revolution with the new energy

sources, communication, transportation, and rise of new industries being the main markers of the revolution (Wyatt 34).

The first new fuel source to be discovered was coal gas. The coke manufacturing process produced the gas. This gas was extremely significant as it was useful in producing bright lights in factories. Most industries used coal light to enable them to operate for longer hours. It was through the coal light that 24-hour operations begun in some factories (Appleby 35).

Energy is a major element in every society. It is the source of power required to run different machine. Many sectors cannot survive without reliable sources of energy. Following the extensive need for power to drive machines in industries, people carry out research every day as they seek to find the most reliable source of energy. It is the same urge for reliable sources of energy that there was the discovery of electricity and gases. The new sources of energy were supposed to replace the use of steam (Wyatt 85).

The Second Industrial Revolution is the catalyst for innovation of the electrical current. In 1831, Michael Faraday who was a British Scientist came up with a proof that electrical current could pass between a wire coil and a magnet. His further analysis of the discovery, indicates that the size of the wire, as well as the distance between of the magnet could determine the strength of the electrical current. The invention was the beginning of the extensive discoveries that have been made in the electricity field (Staton 97).

Faraday's discovery remains critical in the modern inventions, in the field of electricity. People make electricity more powerful from time to time. It is through Faraday's idea on electric current that the first electrical generator

was developed. However, the main factor for determination in the development of electricity is lighting. People were in exclusive need of a source of light that was less harmful to their health. However, through determination people discovered the significance of the light bulb by mid century. However, people had not fully discovered the power since the bulbs remained dim. British industry did not have extensive demand for electricity. However, German and American scientists were extremely keen to ensure the realization of the full strength of electricity (Appleby 63).

The perseverance and determination of the scientists from Germany and the United States led to exclusive discoveries. It is through their efforts that an electric motor was built in 1870s. They had made massive improvements to electricity power to a point that many industries were using electricity to run the machines instead of steam. The scientists realized electricity could be extremely useful in different areas. They were extremely determined to verify that electricity could force development in the transport and communication sectors (Appleby 57).

Transportation

The First Industrial Revolution fashioned a system influenced by the discovery of steam. This made railway the fastest mode of transport then. Railways were only effective for long distances making horse and carriage the most efficient modes of transport during the period. As time passed, people became sensitive of the discomfort that came with railways, carriage, and horse modes of transport. As a result, massive advances came up in the Second Industrial Revolution. It is during this period that oil and electricity driven vehicles replaced horses. Electricity took the place of steam-power

and massive changes were underway through the new sources of power. The new discoveries were of exclusive assistance to transportation of goods in the industrial cities that came up during the First Industrial Revolution (Staton 97).

In 1860, J. Lenoir who was Belgian engineer developed the first internal combustion engine that used gas. Power was generated when gas got into the cylinder after a spark ignition. The spark initiated expansion of the gases in the cylinder with the expanding gases making the engine move. In 1862, further invention was made where the engine was fitted to the vehicle. This attribute to the production of the first petrol fuelled motor vehicle in 1885 by Karl Benz. The vehicle was three-wheeled. Around the same time, electricity was employed into trams. These were forms of vehicles that had been built to assist easy navigation of the cities. Horse and steam drove the first tram. However, in 1863 a change was witnessed where the trams were driven by electricity (Rand 47).

The development continued in 1886 when Daimler built the first four-wheeled vehicle. It had been nicknamed the horseless carriage. Since the beginning of the Second Industrial Revolution, the first car design has been improving. In 1891, the engine was moved to the front to ensure efficient distribution of weight. The first pneumatic air wheel was developed by E. Michelin and A. Michelin. In 1908, Henry Ford a businessperson from the United States came up with a plan to execute mass production of cars. It is through his efforts that the modern car manufacturing industries were born (Rand 47).

Communication

Although, First Industrial Revolution made improvements in communication it did not go to the exclusive that it has risen to during the Second Industrial Revolution. The discovery of electricity played a critical role the changes that were experienced in communication technology.

The first electric telegraph was invented in 1837 by Sir Charles Wheatstone who was a British scientist. Needles and wires were used to send messages to a remote receiver. In 1838, the most massive change in communication was witnessed when American Samuel Morse invented a code of dots and dashes. The dots and dashes were supposed to be transmitted with the telegraph. The Morse code was an extremely instrumental communication tool. The invention encouraged laying of telegraph lines in Britain, United States, and other European countries. This made it extremely easy to communicate across long distances (Echevarria 73).

Alexander Bell made the next improvement that was extremely instrumental in communication, in 1876 where he invented the telephone. The telephone was believed to be more reliable and faster than the telegraph. In addition, it was easy to operate, as it did not require extensive knowledge. It was useful for transmitting and receiving sounds across long distances. The telephone became exclusively famous within a short period. Telephones used copper wires for transmission of signals over long distances. It made it easy for people at distant places to contact each other and discuss critical matters. Telephone is a significant business tool in the present days (Echevarria 76). The other innovation that has been exclusive useful in the communications sector is that of electromagnetic waves. They were also known as radio

waves. These waves were extremely useful in enhancing fast communication. It was extremely easy for people in long distances without a waste of time as there were no delays caused by use of wires for communication. In 1887, further invention was made when Heinrich Hertz a German demonstrated how electricity flowing through one circuit could produce electricity in one second. Guglielmo Marconi who is an Italian inventor improved Hertz's invention. He came up with a formula of using radio waves in transmission of signals. Through the experiment, Marconi came up with wireless telegraphs, which are the representation of the modern radio (Rand 47).

The Second Industrial Revolution or the Technological Revolution has brought in massive changes to the world. However, the main influence of the revolution has resulted from the discovery of electricity. The source of power has been exclusively influential to other activities that have taken place since the revolution. Communication and transport, which are extremely significant elements in a modern society, experienced exclusive discoveries during the Technological Revolution. It is through the revolution that most facilities in the modern society are enjoyed. The revolution is a mark to the modern state of technology, which has been mainly born through invention of electricity as a source of power.

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