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An Analysis of the Similarities Between the Industrial Revolution and the Information Age

Before the propagation of innovation as effected by the English Industrial Revolution, markets were isolated in their towns, messages were carried by couriers along cross-country routes, and people communicated infrequently outside of their small, tightly-knit communities. The Industrial Revolution brought forth the telegraph and mass-production, greatly diminishing the relevance of extensive mail routes and tediously handmade goods. This time period was the source of the evolution of technology in the world that resulted in modern industrial practices. The Information Age expanded upon these new inventions, enabling near-instant communication among people across the world, creating a responsive global market, and bringing forth upgrades to manufacturing techniques. The invention of the Internet affected every industry, bringing people together and eliminating the need for physical interaction. The Industrial Revolution and Information Age both created new financial opportunities for individuals, improved accessibility of long-distance communication, and greatly changed the state of the economy.

The period from 1760 to around 1830 marked the Industrial Revolution of England. According to Joseph A. Montagna, a researcher of the Yale-New Haven Teachers Institute, the period started with the spinning jenny invented by James Hargreaves, which allowed the operator to spin many threads at once (Montagna). This was the beginning of the industrialization of the textile industry, which made textile production significantly more efficient. Montagna also writes about improvements to the iron industry that reduced the usage of charcoal when smelting, which was effective in preventing depletion of England's forests (Montagna). This improvement to the process of smelting iron made it easier for iron workers to obtain the raw materials that they needed. One major focus of the The Industrial Revolution was making production more efficient. As Lewis Hackett of the International World History Project articulates, "The worker at a machine with 100 spindles on it could spin 100 threads of cotton more rapidly than 100 workers could on the old spinning wheels" (Hackett). Factory owners could effectively pay for fewer workers, and still improve the productivity of their factories. This was the basis of most innovation in the Industrial Revolution.

The Information Age, marked by the creation and popularization of the Internet, started in around 1985, during the maturation of the Internet. The Information Age has not yet resolved, and the Internet continues to have a significant impact on people's daily lives. The Internet started as a useful tool for bringing remote people together. J. C. R. Licklider and Robert W. Taylor, two computer scientists who were present during its initial development phases, collectively noted that, given a small set of people who can solve a problem, "[these] people must be brought into close intellectual partnership so that their ideas can come into contact with one another. . . . Let them go their separate ways, and each creates his own empire . . . There has to be some way of facilitating [communication] among people [without] bringing them together in one place" (Licklider, Taylor 29). Bill Stewart, an unaffiliated researcher who specializes in the early stages of the Internet, explains that "[t]he ARPANET was the first wide area packet switching network, the 'Eve' network of what has evolved into the Internet we know and love today" (Stewart). The ARPANET was the first network that, rather than having a single intelligent server and multiple "dumb" terminals, involved multiple computers switching packets amongst each other. This method of communication