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The Telegraph

The evolution of telecommunication systems have taken man on a journey from the invention of the telegraph to video chats over the internet. In the late nineteenth century, the telegraph changed the way society communicated in long distance situations. The invention of the telegraph provided a faster alternative to mail, thus allowing for messages to be communicated in real time. Telecommunication systems not only change the way man communicates with one another, but also changed several ideologies of society. With the introduction of the electrical telegraph in the 1840s, monopolies, local economies, writing styles, and ways of diplomacy all changed. The technology of the telegraph made long distance communication more feasible, and helped improve the general lives of society. Though like any new media, the need to constantly change as new technologies are invented affected the popularity of the telegraph with the introduction of the telephone into the public sphere. However, even with the creation of the telephone, the telegraph is still revered as the first telecommunications system to defy all communication systems before it.

The telegraph grew out of the society’s demand for a fast communication system; a communication system that was bidirectional (Headrick, 2007, p. 121). In 1790, a Frenchmen named Claude Chappe created the first optical telegraph; however it was not until August of 1794 that the telegraph like in Lille, France began operating (Headrick, 2007, p. 122). Optical telegraphs are a long distance form of a telecommunication system that conveys information with the use of visual signals. Though with the use of visual signals to communicate comes the problem with can the receiver see the signal and properly interpret the signal? These questions stemmed the development of the electrical telegraph. The creation of the electrical telegraph began with ability to prove electricity could send messages. The pioneers of this development were Schilling, Gauss, Weber, Steinheil, Wheatstone, and Cooke during the 1830s. With Samuel Morse’s contribution of Morse code, which allowed for the “use of only one wire (Headrick, 2007, p. 126).” In 1846, Samuel Morse created an experimental electrical telegraph line that ran from Baltimore to Washington, thus leading to the explosion of popularity of the electrical telegraph (Headrick, 2007, p. 127). On May 24th, 18444, the first message conveyed over the electric telegraph was “What hath God wrought”; the message was written by Samuel Morse and was sent from the Supreme Court Room in Washington, D.C. to a Baltimore railway depot (2003). By 1850 there were 12,000 miles of electrical telegraph lines in the United States (Headrick, 2007, p.127).

With the popularity of the electrical telegraph changing the ways society communicates long-distance messages, the ideologies of society were also changing. One way the telegraph changed ideologies is the relationship it had with monopoly capitalism. In the beginning the telegraph was monopolized by Western Union who at the time was the first communications empire. To break up this monopoly the production of the telegraph demanded “a new body of law, economic theory, political arrangements, management techniques, organizational structures, and scientific rationales (Carey, 1989, p.205).” These new ideologies, regulations, and laws brought into society from the invention of the electrical telegraph changed the way American companies did business.

As a new form of long distance communication, the invention of the electrical telegraph helped diminish the concept of space and time. With the use of the electrical telegraph, it did not matter where the communicators were, as the telegraph could transport messages in real time. The revelation of communication not being barred by space and time, not only had an effect on personal communication, but also on economic markets. The electrical telegraph made it possible for businesses and consumers to look outside their local markets and economies towards more national markets and economies (Carey, 2007, p. 152). Before the telegraph the market price on a commodity was based on the local supply and demand, but after the telegraph was developed the principle of arbitrage came into effect in the markets. Arbitrage is the process of the “buying cheap and selling dear by moving goods around in space (Carey, 2007, p. 151).” The practices of arbitrage in the United States lead to a decline of average annual price disparity and average monthly disparity of commodities (Carey, 2007, p. 152). Long distance communication changed the ways of local economies, as local businesses had to uphold competing prices on goods or face the revelation that consumers could take their business to other markets.

As local economies had to relearn their basic practices of business by incorporating arbitrage, members of society had to learn how to change their writing styles to adapt to the telegram messages. The telegraph changed the ideology of ordinary knowledge. Due the cost of telegraphs, society adopted a new short hand writing, which made some changes in language. Society had to learn a new way to write messages that were concise and comprehendible (Carey, 1989, p. 204). Telegrams sent by the majority of society were usually messages that conveyed pressing news, while the rich had the luxury to send trifling messages (Standage, 2007, p. 132). From this new shorthand style of writing emerged a “new telegraphic jargon (Standage, 2007, p. 133).” Not only would the telegraph customers use the “telegraphic jargon” but also the telegraphers to talk to one another. Telegraphers would converse with each other using abbreviations, for example the Morse code “I I” (dot dot, dot dot) would translate to “I am ready (Standage, 2007, p. 133).” These abbreviations used by the telegraphers were dependent on dialects and customs, thus there was not set standard on the abbreviations (Standage, 2007, p. 133).

While ideologies of society as a whole were changed or challenged with the invention of the telegraph, as were the practices of governments adapted to encompass the services provided by the electrical telegraph. As a form of media, the telegraph abated the concepts of space and time as the telecommunications machine could send and receive messages across great lengths and at fast speeds. Foreign ministries took advantage of this new technology, as the governments could send messages to their diplomats. The quickness of the messages allowed for the foreign ministries to manage the actions of their diplomats (Nickles, 2003, p. 83). By sending telegrams to diplomats, the governments could respond to international events as they occurred, which allowed for more international interaction and cooperation (Nickles, 2003, p.85). As the interaction between international governments increased, the autonomy of diplomats decreased. Diplomats no longer had great degrees of independence while abroad as their governments could easily get in touch with them and oversee their dealings (Nickles, 2003, p. 85). The electrical telegraph was a tool of connection that was not limited to space and time, thus permitting for greater international relations.

Just like any new media, improvements to make the technology better helped evolve the electrical telegraph into the telephone. In March on 1876 Alexander Graham Bell invented the telephone whilst trying to improve the telephone (Fischer, 2007, p. 143). Bell, along with his father-in-law, Gardiner Hubbard, and Thomas Sanders created the Bell Telephone Company. The Bell Telephone Company opened the first telephone switch board in January of 1878 in New Haven, thus creating the first mass use of the telephone to communicate. Towards the middle of 1878, “about 10,000 Bell instruments were in use throughout the nation (Fischer, 2007, p. 144).” Once the popularity of the telephone grew the race to improve the design of the telephone, and create new telephone companies to compete with Bell Telephone Company commenced. As the telecommunication system evolved from the telegram to the telephone, the number of subscribers to the telecommunications industry rose. During the years between 1880 and 1893 the number of telephones per person grew from one phone per thousand people to one phone per two hundred and fifty people (Fischer, 2007, p. 148).

Though the widespread use of the telephone did not take flight until 1896 (Casson, 2006, p. 109). Before the telephone became commonplace in society, the technology needed to be seen as a long distance communicator that was faster and better than the telegraph. The general manager of Bell Telephone Company, Theodore N. Vail, took on the challenge to convey the telephone to society as the superior telecommunications tool. To make the telephone more widespread, Vail developed the concept of using copper wires to construct telephone wires. Vail’s “hard-drawn copper wires” enabled telephone wires to be assembled over long distances. With the ability for long distance communication accomplished by the telephone, Vail was able to expand the Bell Telephone Company by making the company’s purpose customer service thus making the telephone more popular than the telegraph (Casson, 2006, pp. 110-130).

The communications technology revolution that encompassed the invention of the telegraph sought to challenge the ideals and practices of the current ways of communication. Society desired long distance communication in real time. This wish of the general public was granted by the invention of the optical telegraph by Claude Chappe in 1790. With technological advances, the electrical telegraph was invented during the 1830s and the telegraph became a popular tool of communication. The electrical telegraph allowed users to send messages, or telegrams, to one another in real time across great distances thus eliminating the concept of space and time in communication. Not only were the traditional ways of communication changed, but the legalities of monopolies, local economies, writing styles, and ways of diplomacy were also changed. As the ideals of society are revolutionized with invention of new technologies, the new technologies themselves are altered with each new invention. The telegraph faced a technological challenge from the telephone, but the telegraph will always hold a major place in telecommunications history as it transformed the ways of communication.

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