The other day I was trying to teach my oldest son about advancements in technology by using the comparison of his cell phone with the rotary dial phone of the past. The jaw-dropping expression that he gave me made me feel that I might perhaps better belong with some of my caveman buddies in a field bludgeoning an animal to death for the nights food! Anyhow, I took this with a grain of salt and still strive to help my boys understand where our technology comes from. One very interesting technology that is often under looked for its contribution to technology is the telegraph. In fact, the telegraph might just be the technology that has most affected our country. This is evident with how it initially improved communications, how modern communication lines are based on the telegraph, and how the telegraph has contributed to computer science.

First, credit needs to be given to the telegraph for improving communications at long distances. Just imagine for a minute having an important communication and well it is taking the time of snail mail to not only reach the recipient but also to return to the sender. There were no computers, no fax machines, no scanners. The means of communication was at the mercy of horses and trains. To my son this is very similar to the comparison of the cell phone to the rotary phone I grew up with. With the telegraph this was no longer the case. A notable example of this was with the nomination of Henry Clay on May 1, 1844 (Bellis, 2017). The announcement of his nomination was hand-carried to Annapolis junction. What they did not know was that Samuel Morse had already wired it by telegraph to the capital and that it was old news. The communications revolution had been kicked into gear!

Second thing that needs to be considered when looking at the impact of the telegraph on technology is how it contributed to the communication grid that we still use today. Telegraph is to telephone as rotary dial phone is to cell phone. Sounds far off at first but is not that farfetched a statement. The telegraph was the precedent of the telephone. It should be noted that Alexander Graham Bell was experimenting with the telegraph when he deduced that the same can be done with the voice (Lib. of Cong. U.S. Govt., na). Not only was the telegraph responsible for kicking starting the modern-day phone but the above ground grids that telephones use were built on a lot of the same grids that were used for the telegraph. So, it can be concluded that the telegraph is responsible for establishing a lot of modern day communications infrastructure.

Finally, it should be noted the impact of the telegraph on Computer Science. J.C.R. Licklider, someone considered one of the forefathers of computer science, stated that the computer is the direct descendant of the telegraph in that it enables one “to transmit information without transporting material”(Ding, 2017). This is perhaps the largest contribution of the telegraph and best demonstrates how we can not only communicate across the world instantly but also do it on an object that fits into our pocket that serves as our calendar, game console, music player, alarm clock, and countless other applications. The communication that the was employed by the telegraph is very similar to the base communication done with a computer and between computers. The Boolean, which is basically on and off switches, is what every computer application we know of is based. The code that was used for the telegraph is directly linked to modern programming languages. This is best exhibited by the similarities of packet communications in computers and their ancient comparison the telegraph. The invention of the telegraph set the stage for the internet (Barry M. Leiner, 1997).

Going back to the analogy of the radial dialed phone we can see that technology seems to improve at an exponential pace. With all our modern-day luxuries from the computer and the internet we really need to pay homage to the technology that laid the first bricks to the data revolution: the Telegraph. With the contributions that the telegraph made to early communications, the contributions that the telegraph had on our modern-day communications infrastructure, and the direct and significant impact that the telegraph had on computer science it should be recognized that the telegraph, if not the largest contribution to our country, is one of the major players that has contributed to our country and our livelihood.

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