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Research title:

Communication devices: history and development.

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introduction:

What is communication? Communication is the ability to transfer knowledge and information from one part to another using different methods such as signals, speaking, sounds and many other methods. Throughout history, the methods of communication were developed as the needs of the societies changed. They needed faster and better communication devices to fulfill their growing needs. At the times of war, they needed safer communication devices so, that led to the birth of cryptography which was used since old times as a way to transfer classified information. In the early 1800's, the telephone was invented, which made communication even easier because it shortened the distances between everything. But the biggest evolution in the history of communication came with the invention of the internet by Tim Burners Lee in the early 1990's which turned the whole world into a small village. The evolution of the communication devices continues until today. So, because communication devices are very important nowadays, I wrote this article to show their development throughout history and to show the advantages and disadvantages of these devices in our daily life. I also wanted to answer the following questions:

Are modern communication devices really invading our world and are they eliminating other communication devices? And in what way?

I hope you find all the joy and benefit you need in this article.

Section one: the development:

Communications in the ancient times:

The ancient and early eras started from **3500 BC** and ended in **1099 AD**. The very first kind of communication devices appeared in "Sumer" in the form of pictographs written on clay tablets. Pictography is the usage of pictures to express certain ideas and information which means that it is a kind of visual communication with the use of a public key. In **2600 BC** scripts appeared in Egypt. They spread widely because they were very easy to reserve and use.[1]

Picture 1

In **1800 BC**, China was using smoke signals. These signals allowed the soldiers who were stationing on the Great Wall of China to warn their friends 500 miles away from a potential danger using the smoke signals from one tower to another[2]. Three hundred years later, Phoenicians invented the alphabet. The alphabet is a group of letters that are assembled together to give a certain meaning. The invention of alphabet caused a great jump in the history of communication because it led to the invention of writing later. In **1400 BC**, the oldest writing in China was found. It was written on bones. 500 hundred years later, China organized a postal service system which was only used for the needs of the government[3]. In around **776 BC**, pigeons were also used by the Greeks to send messages such as the outcomes of the Olympic Games in ancient Greece to Athens. Plenty of time later, exactly in **500 BC**, Greeks started using many different methods of communication which were new and creative such as sending signals via sunlight, via mirrors, and sometimes via shields. They also used fire signals at night. With these techniques, they were able to send messages to a distance that reached 40-100 kilometers depending on the visibility. The

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١- Timeline Of Communication History written by Irving Fang (the university of Minnesota –the school of journalism) page 1

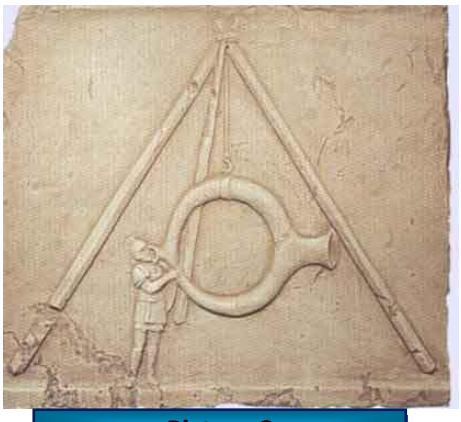
٢- The History Of Communication Technology by James Parker Doyle

٣- Timeline Of Communication History written by Irving Fang (the university of Minnesota –the school of journalism) page 1

method with the mirrors and the sun was called Heliography, which means writing with the sun light. Another simple method that was also used was colored flags to symbolize specific messages, and these flags were used for a long time in the Greek Navy.[4]

Picture 2

Greeks also used Acoustic signals. Acoustic signals are kind of sound communications where a giant musical instrument was used by Alexander the Great to send messages probably that his army could hear from a distance of 5 km. This instrument was called the Stentorophonic tube, and this name came from Stentor, a figure of Greek mythology.[5]



Picture 3

What is communication? Paper presented at annual euro Active/Agfa meeting, Budapest, In Nov, 26, 1999 Faculty of Philosophy Leiden university. - ٤

What is communication? A Paper presented at annual euro Active/Agfa meeting, Budapest, In Nov, 26, 1999 Faculty of Philosophy Leiden university. - ٥

100 years later, exactly in **400 BC**, cryptography was being used in Sparta. The "Skytale" or "Scytale" was a Spartan method for encryption. It consisted of a piece of wood and a leather strip. Any communicating party needed exactly the same size wooden stick. The secret message was written on the leather strip that was wound around the wood, unwound again and sent to the recipient by a messenger. The recipient would rewound the leather and by doing this enciphering the message. In around **350 BC,** a military Greek scientist and cryptographer invented an optical system for communication similar to the telegraph: the water-clocks. The water-clocks were an early long-distance-communication-system. Every communicating party had exactly the same jar, with a same-size-hole that was closed and the same amount of water in it. In the jar was a stick with different messages written on. When one party wanted to tell something to the other, it made a fire-sign and when the other answered, both of them opened the hole at the same time. And with the help of another fire sign closed it again at the same time, too. In the end, the water covered the stick until the point of the wanted message.

Picture 4

In about **100 AD**, Roman couriers started carrying government mail across the empire. The invention of papers came five years later by **Tsai lun** and the true printing appeared in **450 AD** in China in the form of ink seals stamped on papers. It was not a long time until China started to print books. That was in around **600 AD**. 15 years later, picture books were printed in Japan for the first time ever. In about **1000 AD**, Mexican people started fabricating paper using tree barks. The ancient age ended with a great invention ,which is the movable type. It was invented by Pi Sheng using clay[6]. As we saw, most of the communication devices in these ages (the ancient ages) were in the form of writing and signals which means that the communication devices until **1099 AD** weren't practical at all.

1.2 Communication in the early and middle ages:

The early and middle ages actually started from **1100 AD** and ended in **1399 AD**. These ages began with the invention of stitched books by the Chinese in about **1116 AD**. In **1200 AD**, the letter system was brought to life. It was used in the European monasteries for communication. At the same time, the University of Paris started a messenger service to transport mail and messages from one place to another. About 50 years later, Koreans started metal type. In **1300 AD**, the wooden type was established in Central Asia. At the end of these ages, the Koreans started producing Bronze characters which were found easy and nice to deal with. As a conclusion, we see that nothing really important was invented during this age except for the ideas concerning printing and the use of metal characters which led to the birth of the typing machine few decades later.

1.3 Communication in the late middle ages:

The late middle ages started from **1400 AD** and ended in **1599 AD**. At the beginning of these age, the Europeans started the method of block printing which was first founded by the Chinese. At the same time, few news letters were circulating in the European countries which were very similar to the daily newspapers[7]. In **1455 AD**, one of the biggest inventions of all times was created, which is the printing press. The history of the printing press dates back to the **1400's**, when **Johannes Guttenberg** created a model based on primitive versions already in use. His printing press used removable metal letters that could be rearranged to create blocks of text. Before that, people had to pen texts by hand, which was an extremely laborious process[8]. In **1560 AD**, private postal systems grew in Europe. Five years later, the pencil was invented[9]. The middle ages ended with the invention of the pencil. This ages witnessed one of the most important inventions ever: the typing machine. And in these ages, the ideas concerning postal services and mail were used for the first time.

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٧ - Timeline Of Communication History written by Irving Fang (the university of Minnesota –the school of journalism) page 2

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1.4 Communication in the age of Enlightenment:

The age of Enlightenment started in **1600 AD** and ended in **1799 AD**. At the beginning of the age, exactly in **1609**, the very first newspaper was published in Germany. Registered mail appeared for the first time ever in France in **1627**. And in **1650**, the first daily newspaper appeared in Leipzig, Germany. Three years later, in **1653**, mail boxes were established in Persia which was a great jump in the history of mail and postal services. These mail boxes organized the job and made it a lot easier. After two decades, the postal network started expanding. In **1696**, the existence of the paper mills in England increased, and the number of these paper mills approached 100. In **1704**, Ads started taking their place as a helpful method in communication throughout the newspapers in Boston.

Picture 5

Six years later, a German inventor developed the three color painting which depended on the three basic colors red, blue and yellow. In **1790**, the most important invention in the whole era was found, it was the hydraulic press which was invented in England. It took the lead towards the development of the press centers so that they could depend on mechanical power rather than manual power. Four years later, the first letter carriers appeared in America. In **1794**, signaling systems were found. They connected both Paris and Lille in France. At the end of this age, **Robert** (a French inventor), fabricated a paper making machine which made the process of manufacturing paper a lot easier. The Enlightenment age ended after the invention of the paper making machine. This age carried with it a lot of new inventions and discoveries in the history of communication devices such us the hydraulic systems, the new press centers, the paper making machine, and the invention of colored printing which makes this age the most effective one not on the history of communication devices only, but on the history of all mankind.[10]

Timeline Of Communication History written by Irving Fang (the university of Minnesota –the school of journalism) page 3 -١٠

1.5 Communication in the 19th century:

This age covered the whole 19th century. At the beginning of the age, mail networks witnessed a great expansion and they started connecting different countries. In **1806**, the well-known carbon papers were invented. A year later, the camera had improved its ability to trace pictures. In **1808**, an Italian inventor named **Turri** invented a typewriter for a blind countess. This invention presented a new problem which is: developing a universal language that all blind people can use in reading. Of course, humanity solved this problem plenty of time later. The well-known Brill's language is now considered to be an effective way that blind people use to read . Because of the need to find a faster and better way of transferring information, the idea of the telegraph was first brought to life in Germany in **1810**. Back then the telegraph was an electro-chemical one[11]. But the development of the telegraph didn't stop here. There were many trials of building an effective and useful telegraph system. In England, for example, **Ronalds** built a telegraph in his garden but no one seemed to notice it. That was in **1823**. After that, **Wheatstone** and **Cooke** patent an electric telegraph in England. But the true evolution of the telegraph came on the hands of one man. **Samuel Morse**. Back then, he was actually working as a painter, and he received a letter that his wife was fatally ill. The letter took a lot of time to reach him so when he decided to go back home his wife had already passed away. Driven by the inefficiency of hand-delivered letters, and by the death of his wife, **Morse** worked hard on developing an electromagnetic telegraph system. More importantly, he also developed a system of communicating through this machine. It was known as Morse code and it consisted of a series of coded dots and dashes that corresponded with the alphabet. After patenting his invention (the electromagnetic telegraph), telegrams soon became quite popular as a way of delivering short amounts of information quickly and across long distances[12]. Telegraphs were used in business. Actually, the first use of the telegraph as a business tool was in **1847**. But telegraphs were mostly used in the times of war. A lot of telegraph systems were founded for war purposes especially during the Napoleonic Wars. Some of these systems, such as the British Admiralty network connecting the main naval bases to London, were abandoned or scaled back once the Napoleonic Wars came to an end. Others survived much longer, and were even expanded. The French system was remarkably extensive, with over 3,000 miles of lines in **1844**. Many of the French lines continued operating until **1853**. A few Swedish lines continued in service up to **1881**. Telegraphs were also used widely in the World War two. So as a conclusion, the telegraph didn't have such a pricing history

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[11] Timeline Of Communication History written by Irving Fang (the university of Minnesota –the school of journalism) page 3 -

[12] The History Of Communication Technology by James Parker Doyle -

because it was mostly used for the needs of the governments not for the pure need of a new communication method[13].

Picture 6

Now let's go back to talk about the rest of the age. By **1815**, there were already about 3000 postal offices in the USA alone. In **1821**, **Charles Wheatstone** reproduced sound in a primitive sound box which was the forerunner of the microphone. This great idea led to the development of what we call sound communication which the radio, the TV, the cell phone, later will be such great examples of it. In **1830**, 3D pictures were first shown in the stereoscope of **Wheatstone**. Nine years later, the first electrical printing press was put into service. Plenty of time later, a lady published her thoughts about computers which were the beginning of the informatics evolution all around the world. In **1846**, the speed of the printing press increased. A double cylinder rotary press was being used back then. It had the ability to print 8000 papers per hour. After nine years, an experimental phone was being built in France. It was the first of its kind and it opened the door in the face of developing more effective and useful communication devices that could connect the whole continents of the world together easily. In **1861**, the idea of colored photography was no more a dream. The first chemical means of colored photography appeared. A year later, in Italy, a man named Casseli sent drawings over a wire. The first international postal conference was held in **1863**. A year later, scientists had the ability to transmit electromagnetic waves. The electromagnetic wave back then, could only be transmitted for 14 miles. In **1869**, and after plenty of years, the colored photography was brought to life. Not a long time passed before newspapers started printing colored pictures with their news. In **1873**, the famous mathematician **James Clark Maxwell** published his theory concerning radio waves which contained several ideas that helped later in the development of radars and radios and their use in the field of communication. In **1875**, **Edison** invented the mimeograph which is an office copying machine[14]. In **1876**, the telephone was invented by the great inventor **Graham Bell**. Back then, **Graham Bell** was working very hard to invent

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١٣- The history of communications and its implications for the Internet by Andrew Odlyzko page 95

١٤- Timeline Of Communication History written by Irving Fang (the university of Minnesota –the school of journalism) page 5

this machine that no one had ever seen anything like it. He had his own vision of the machine and he had been working on it since three years just waiting to hear the voice he wanted. And on one hot after noon, he heard that voice. He went to the room beside his and asked the little mechanist who was helping him to speak through the machine and he heard the sound in the other room!! and after that the telephone spread all over the world[15].

Picture 7

In **1880**, **Leblanc** theorized the idea of transmitting a picture in the form of segments. In **1888**, the Kodak box camera made the process of taking pictures simple and easy. During the same time, **Heinrich Hertz** (who is considered to be one of the fathers of the radio) proved the existence of the radio waves. And for the first time, public phone booths (which were coin operated) were established. Three years later, **Dickson** built a motion picture camera and two years later, he built the first motion picture studio. In **1894**, **Marconi** invented wireless telegraphs which were so close and similar to the idea of the radio. Two years later, X-rays were used for the first time in photography. During this time, around **1898**, photographs started being taken by artificial light which is very similar to the way we take personal pictures nowadays in studios. At the end of the 19th century, loudspeakers were invented and sound was recorded magnetically by **Poulsen** in Denmark. As a conclusion, the 19th century is the richest age of them all in what comes to communication devices' development. A lot of great ideas were discussed in this century which will form the base for the next step of evolution in the 20th century.

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the history of the telephone BY HERBERT N. CASSON the first edition page 2 - [15]

1.6 Communication in the 20th century:

This age started from **1900** and ended in **1995**. The most important device which was widely used since the end of the 19th century until the beginning of the 20th century , is the radio. So let's talk a little bit about its history. In **1885**, **Heinrich Hertz** proved that electricity can be transmitted in the form of electromagnetic waves. He conducted experiments in sending and receiving these waves during the late **1880s**. In **1891**, radios started appearing on ships. A year later **Nikola Tesla** wirelessly transmitted

Picture 8

Electromagnetic energy. **Marconi** continued **Tesla's** work and established a wireless telegraph and a signal company. At the beginning of the 20th century, exactly in **1906**, **Reginald Fessenden** was the first ever who succeeded in transmitting a program of speech and music[16]. For sure, the usage of the radio has decreased over time because of the invention of better substitutes. The radio wasn't the only important communication device in this century there were many other devices, and now we are going to talk about the rest of these devices. At the beginning of the century, in **1901**, the first electric type writer was brought to life. At the same year, **Marconi** started sending a radio signal through the Atlantic as a test. A year later, the US navy started using radio telephones abroad their ships. During this time, the ability to transfer pictures increased a lot because of the photoelectric scanning which had the ability to send and receive pictures. At the same year, cables were established. A year later, in **1903**, a lot of technical improvements occurred in radios, telegraphs, photography, movies and printing. A year later, the answering machine was invented. During the same time, **Fleming** invented the diode which improved the radio. In **1905**, a French inventor named **Pathe** colored black and white movies using a machine and a year later, a new process was found for coloring books which was cheaper and better.

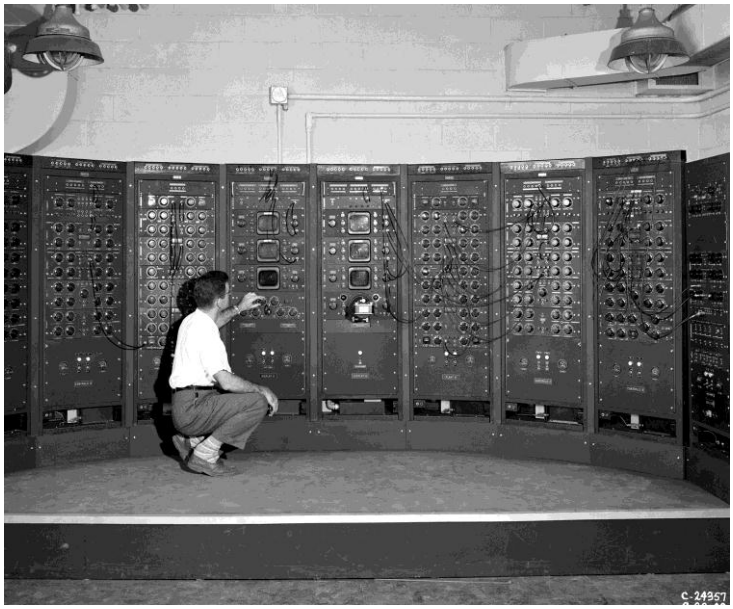
[16] (A short history of Radio With an inside focus on mobile radio) pages 1 and 4 -

After that, the first program of voice and music was broadcasted in the USA. In the same year, the first animated cartoon was produced. A year later, in Russia, an inventor named **Rosing** developed the theory of the television. In **1911**, the efforts for turning the sound into motion pictures increased, leading later to the invention of the television. In **1914**, a better triode vacuum tube was invented which led to the improvement of radio reception. A year later, wireless radio services connected both USA and Japan. In **1915**, the first electric speaker was invented and in **1918**, the first regular airmail service was established connecting both Washington and Newyork. A year later, the shortwave radio was invented and later on in the same year, the flip-flop circuit was found. This circuit enabled the computer to do counting processes. In **1920**, sound was recorded electrically after it was being recorded magnetically for many years. Later on, quartz crystals were used in radios to keep the signals from wandering. In **1922**, the first commercial was broadcasted. Later on that year, the 3D movies started appearing but people needed to wear special glasses to see them with one red lens and one green lens. It wasn't a long time before the first documentary appeared. The neon signs were used as a way of advertisement few years later. In **1926**, **Baird** demonstrated an electro-mechanic TV system and a year later, as a complete to his work**, Farnsworth** assembled a complete electronic TV system.

Picture 9

In **1928, John Baird** invented a video disc for recording television programs and broadcasts. A year later, telegraphs were developed. By that time, telegraph tickers were able to send 500 characters per minute. Television studios started appearing in London at the same time. In **1930**, a very important invention was found which is the use of light bulbs instead of the dangerous flash powder (magnesium) in cameras. And after many years of paper study, the computer was finally introduced. Three years later, **Armstrong** invented the FM waves in radios. By the year **1936**, Bell laboratories had invented a sound recognition

machine and the great mathematician **Alan Turing** (who broke the Enigma ciphering machine) published his book "computable numbers" which described the general purpose of the computer. The ball point pen as we know it wasn't invented until **1938** by two brothers from Argentina. Three years later, the microwave transmission was being used. In **1941**, computers started developing very fast. For example, Zuse Z3 was the first computer controlled by a software system. A year later, in England, the first digital computer was introduced which was named Harvard Mark 1. Not a lot of worthy inventions were introduced in the time between **1944** and **1947**. But in **1947**, a Hungarian engineer invented the Holography technique which is a technique that projects 3D pictures in front of us, and in the same year, transistors were invented to replace the vacuum tubes. In **1949**, the magnetic core memory was invented. A year later, the regular colored television transmission was being used. By the middle of the 20th century, in 1950 to be exact, the Vidicon camera tube improved the television's pictures[17]. Now let's talk about the communication devices in the second half of the 20th century. In **1951**, computers started being sold commercially and at the same time, the cable network reached everywhere.



Picture 10

Picture 11

In **1952**, 3D movies appeared in a more organized way but still needed special glasses to watch. Two years later, the Soviet Union launched the Sputnik which was the beginning of the idea of using satellites in the communication's field. During the same time, the colored TV broadcast began to be regular and in the same year, transistor radios were sold a lot. A year later, tests started to see the possibility of communicating via the fiber optics and music was recorded on tapes. Three years after launching the Sputnik, signals were sent

[17] Timeline Of Communication History written by Irving Fang (the university of Minnesota –the school of journalism) pages 6 - to 11

from space using this satellite. During the same time, the idea of communicating using satellites was taken into consideration and rockets were fired into space to send signals into earth stations. In **1959**, the weather news and the local advertisements were put into cables and broadcasted everywhere. During the same time, the microchip was invented and the idea of the artificial intelligence was considered important and researches about it started in Bell labs. In **1960**, balloons were sent into space to gather information and reflect signals back to earth. One year later, Bell labs tested the possibility of communicating through light waves to make communication faster and easier. In **1962**, minicomputers were invented and later on, more satellites were sent into space to capture images. Some of these satellites (which were probably military), had the ability to capture the photo of a car being driven anywhere on Earth. In **1964**, the international satellite organization was formed. By the year **1965**, most of the broadcasts worldwide were in colors. During the same time, a machine called the Linotror, had the ability to produce one thousand characters per second and the number of telephones increased in a mad way reaching 200 million telephones by the year **1967** and half of them were in the USA alone. In **1968**, the RAM microchip reached the markets worldwide. Now people can save and preserve their work and their private things on their personal computers. A year later, the floppy disc was invented which made great success in the field of computer engineering and it was the forerunner of the laser CD. In **1971**, Intel (the well-known computer company) built the microprocessor. Two years later, the microcomputer was introduced in France and it was just a matter of time before it spread outside to reach USA In **1975**. Microprocessors soon reached everywhere, it was used in the still cameras in **1976**. By **1979**, the system of voice recognition was highly developed. It had the ability to recognize 1000 words. In the same year, the first cellular phone network was established. A year later, the fax service began. In the same year, 24 hour news channels appeared like the CNN. In **1981**, a lot of developments happened concerning transistors and the Hologram (holograph) technology. Moreover, the laptop was invented in the same year and it took the whole world by a storm because of it's nice shape and it's large usage. At the end of this year (**1983**), the cellular network expanded reaching USA. In **1984**, experiments started to test the possibility of manufacturing a translating machine. Apple Macintosh (the operating system for computers) appeared in the same year. By the year **1985**, CD's were highly developed. They had the ability to store 270 000 papers of text on each one. In the same year, a new technique was found which is the break of the picture into dots . This process made manipulating pictures an easier job to do and the ability to transfer pictures became way

Picture 12

easier. Still in **1985**, radios got smaller and better and Japan developed the 3D TV. Now people can watch 3D pictures and videos without using special glasses. In **1989**, the Pacific Link fiber optic cable opened, it had the ability to carry 40 000 phone calls. In **1991**, CNN dominated the world especially during the Gulf war. At the end of this century, the CD ROM had the ability to carry a lot more information and the flat TV was invented in the same year. That puts an end to our last communication age. But, the development of the communication devices didn't stop here. In the 21th century, a lot of things were invented like the Facebook, the social apps like What's app, the Email which is still one of the main means of modern communication methods, but it is facing some competition from instant messaging and social media services[18]. Skype is also an important method of communication and it is a type of applications that enables people to communicate by seeing each other using small cameras attached to the computer. We can say that the 21th century just developed the ideas that were discussed in the past that's why we didn't talk about the 21th century a lot in this article.

Picture 13

[18] The History Of Communication Technology by James Parker Doyle -١٨

1.7 Notes:

A lot of things that were mentioned in the article above were a bit unexpected. For example, why did we mention the pen and the ball point pen? And how do they help us in communication? To be clear, all the things that were mentioned above are associated in some way in transferring knowledge from one part to another, thus it's a kind of communication devices. In this section, we illustrate some of these things to make them clear to the reader:

1. The pen: as we mentioned before, writing is considered to be a method of visual communication because it transfers knowledge from one part to another. So, since writing can't be performed without some device (which is the pen in our case) we mentioned the pen and how did it develop from pencils to pens to ball point pens and so on.
2. The camera: pictures are considered to be a type of communication because it expresses some thoughts and ideas. Pictures can also be used to express what a person thinks or feels which helps him to communicate with others in a more elegant way. So, since we are talking about the history of communication devices, cameras and any other devices that are used to manipulate or create pictures should be mentioned.
3. Paper and printing: paper and printing are also connected to communication in a deep way. Magazines, books and newspapers which are considered to be great communication methods are all printed on papers. That's why we mentioned the development of paper industry and the development of the printing press.
4. Movies, broadcast and cinema: Movies and cinema and theatre actually are the practical shapes of knowledge, thoughts, and ideas. This means that different ideas and thoughts are expressed by a movie or a play on a theatre. Moreover, documentary films and movies are two of the biggest sources of information ever. So, it was very essential to mention how the movies and the cinema developed by time and to mention how did video cameras and recording devices develop too from being black and white to being colored for example.
5. The computer: The computer (including the laptop) is considered to be one of the best communication methods in the world. It's a visual method and a sound method at the same time. We can surf the internet using the computer we can read electronic books also. So, because of its big necessity and because of its big role in communication I had to mention everything concerning microchips, minicomputers, RAM memory, microprocessors, transistors and circuits and any other invention that helped us develop the computer.

Section 2: Advantages and disadvantages of communication devices.

2.1 The advantages of communication devices:

Communication devices have a lot of advantages in our daily life. Communications devices help connect the whole world together. They also save time and money. For example, when we want to tell a person something important it's not necessary that I should go and talk to him face to face, it's not always easy. So, with communication devices like the cell phone or the telephone we won't worry about these tiring and boring things. Communication devices also help us in work and business deals. A lot of employees and workers started working from their homes via the internet. They then send their work to the company that they work in which saves a lot of time. Moreover, a lot of big business deals are made by Skype and through what we call chat rooms. The amount of information that we get and the cultures that we introduce to while we are using the internet or watching the TV are enormous, which means that communication devices are also a good source of information when they are used in a good way. And communication devices help us feel the world around us, we can know about anything that happens anywhere in the world in a blink of an eye.

2.2 The disadvantages of communication devices:

Communication devices can be misused. A lot of misguided information can be published and discussed through the communication devices. Using communication devices in a wrong way can cause physical and mental and moral injury. For example, using the computer for many long hours can cause a lot of pain in the neck, the eyes, and the back. It can also cause headache. When I mentioned moral injury I meant bad internet sites and bad books which can develop a lot of misbehaving manners. Moreover, social apps on the cell phone and the Facebook for example, can cause addiction which will eventually lead to many problems. Actually one of the biggest disadvantages of communication devices comes from TV and Movies. Violence is spread everywhere. A lot of children watch TV programs and movies without knowing the big danger that they are exposing to. The so called "the culture of violence" is planted in their souls and minds. The big use of communication devices may kill our ability to be sociable because it makes us prefer talking via communication devices over the face-to-face communication.

Conclusions and recommends:

Communication devices developed through history as the needs of the communities changed. For example in the early ages, we saw that nearly nothing of the devices that we use now were invented back then because the people's needs were totally different than ours. This gives us the conclusion that nothing develops except when the community does or when the community needs it to develop. Communication devices in general have a lot of advantages actually more than its disadvantages but the person who uses the communication devices is the one who defines good and bad in our case here. Every person has the ability to misuse the communication devices, and it’s very important that each person is raised in a good way and it's also important that conscious is spread every where. Besides that, when we surf the internet we should just visit famous sites. Now let's answer the questions that were proposed at the beginning of the article. No one can deny that modern communication devices are conquering the world but it isn't bad actually. This invasion has its advantages and its disadvantages and naturally, it's just the next step of evolution!!. As advantages, modern communication devices are way better than any other method of communication because we can reach anyone that we want to talk with wherever he is. Moreover, news is spread easier via these devices. For disadvantages, these devices are big sources of distraction and they are a very good way of killing the sociable sense of every person who misuses them. When these devices were invented, a lot of older devices were buried and forgotten. For example, the Email is now being used less because of the invention of the social apps and the instant messaging methods. And so does the telephone. But, let's be frank, this elimination step is essential considering any development process and for sure, as humans, when we find something better we go towards it and we forget the past. So, as a conclusion modern communication devices are weapons. They are used in both sides with us and against us. It's **our** mission to decide now. Thank you.

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The index of the pictures: