

TECHNOLOGICAL EXPANSION

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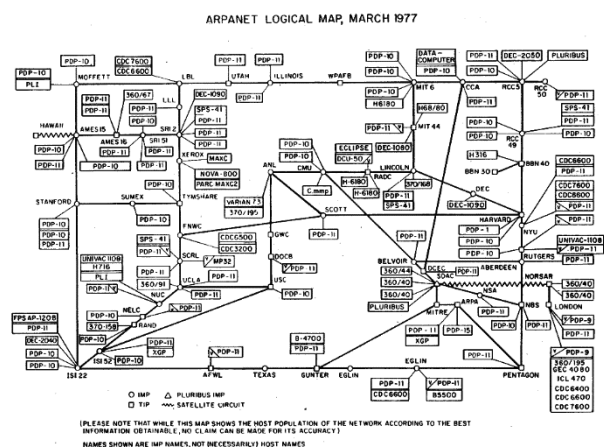
Honors American History

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Computer technology has developed significantly within the last century. At the start, they were machines that took up entire rooms. But now they are small personal computers that can weigh less than 5 pounds. The biggest benefit of this new kind of technology is the availability of information and the ways that people were now able to communicate with each other. With increased access to technology, more people were able to access information. The service industry also boomed as a result of this new kind of technology. The significant expansion of the service industry created a corresponding increase in the number of white-collar jobs¹, but also caused jobs to go away. With the new wide availability of information, security issues began to concern big corporations and governments. In the future, the world will be completely run by computers, with almost every task being done by a computer. Computer technology has developed significantly within the last century affecting the communication, economic, and global security areas, and will continue to grow to a point where the world will be run dominantly by computers.

Computers have changed the communication world in a way that nobody can measure. Just take a moment to think of the ways we get information today. Now imagine trying to do

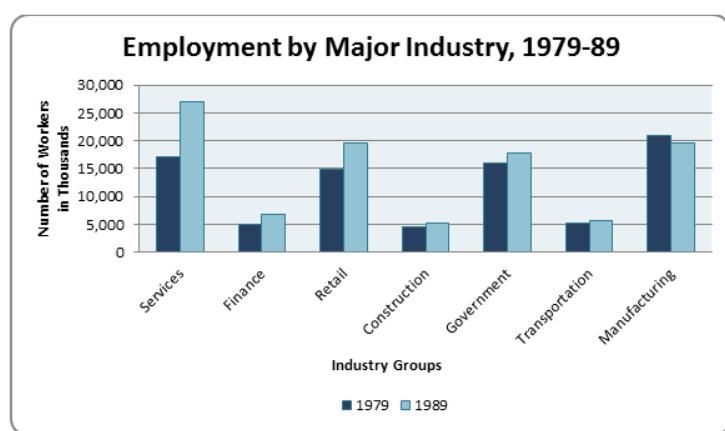
those tasks before computers, as we know them now, existed. Originally, computers were designed for the military to communicate. One of the earliest computer networks is known as The Advanced Research Projects Agency Network (ARPANET). This created a more effective communication



A logical map of the ARPANET in March 1977

method for the military.¹ In 1971, the first email was sent by Ray Tomlinson.² By 1993, the internet was made public to everybody.³ This was very revolutionary as people could conduct their daily tasks much easier and quicker. Before email existed, you wrote letters. Letters had to be hand-delivered by someone and would take days to be delivered. An email can be sent and replied to within 5 minutes. Bills could be paid online, and reservations could be made on computers instead of sitting on a telephone line for hours listening to music most of the time. Just imagine what communication would be like without computers, it would be much different than today.

As a result of the new technology, the service industry blossomed. Some of the services included banking, computer programming, and schooling. The significant expansion of the service industry created a corresponding increase in the number of white-collar jobs.³ However,



This graph shows the transformation of the US workforce during the '80s.

it did pose a threat to lots of jobs. As personal computers became more readily available, more businesses invested in computers to improve research, production, and sales.³ This resulted in humans being replaced with computers to get work done more

efficiently, and this problem continues to this day. Let's look to today, where we can shop at almost any store online. We can order something online today, and have it delivered to our

¹ What is ARPANET?, June 16, 2017. <https://www.computerhope.com/jargon/a/arpnet.htm>.

² Computer Networking History, April 2, 2019. www.computerhope.com/history/network.htm.

³ Lesson 42 Notes

house as fast as the end of the same day. Computers have forever changed business and have made it much easier for shoppers and giving them many more options.

With the wide availability of information, it poses many security threats for information that is meant to be kept private. This is the main concern that big corporations and governments have to worry about daily. Privacy became a major concern for the government and the American public.³ As information has become more accessible, it is more difficult to ensure that certain information was kept private. Because of the openness, they must make more steps than before needed to ensure that the information is kept private. In the later 1990s, people were able to download movies and music and share them with whoever they wanted. This is an act known as piracy. Creators felt this infringed on their ownership rights. With the development of streaming services and sharing platforms, creators are still battling to protect their work against piracy.³ The openness of computers is nice and convenient, but there are times where it can be **too** open.

Let's take a moment to reflect on how computer technology has evolved since its creation. We went from a time of writing letters and having to do everything in person to be able to do it all remotely on a computer. Instead of writing letters, we can now send an email and get a response within minutes. Instead of calling someone on a regular telephone, we can FaceTime them and talk and see the person at the same time. We have come a long way, but this is just only the beginning. By the end of the century, the world will most likely be dominated by computers. Instead of in-person stores, all shopping will be done online. Instead of in-person school, kids will learn from their computers at home. There are so many things out there that we have not grasped yet, and we can only imagine what the world will be like at the end of the century.

Computer technology has changed the world, we cannot deny that. We went from a time in which the quickest way of communicating with someone far away was by writing a letter to be able to send emails. This new kind of technology allowed for information to be accessible anywhere at any time. Think about it, you can learn foreign languages through a computer. The service industry has boomed with many new kinds of jobs being created. With the openness of information, there comes the threat of information meant to be kept private being made public. There are times where the openness of computers can be **too** open. We can only imagine what the future has in store for us. By the end of the century, the world will be dominated by computers.

Bibliography

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Lesson 42 Notes.

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