

For years, people have been anxious that machines will take over the control of the world – and those concerns are not groundless. It's totally possible today that robots with all manner of human-being features might be produced, able to show empathy, speech cognition, and a great level of intellect.

If the robots are compatible, that might be very useful, like for the lots of single human in the world that needs a regular and dependable partner to live with. However, the robots might choose to take over and turn people into slaves too.

Putting aside science-fiction, technological developments and machines have not harmed the Earth so far; on the opposite, mechanization means that people can work so much less, which lets them be imaginative, productive, or just inactive. That trend is going to remain as technology develops, therefore we should be considering the advantages and disadvantages that this development in AI has brought for us.

Chapter 1 - The Industrial Revolution became the ground for the Information Revolution.

At the times that machines and factories began to seem in nineteenth-century Victorian England, lots of people were judging that late improvement. Especially, Charles Dickens was anxious about the possible impact that machinery could have done on England's working-class laborers and stated those concerns in his books.

Even then, humans have concerns about losing their jobs to technology. However, it did not prevent the development made, since mass production was launched during the Industrial Revolution.

In fact, it wasn't the machines that caused that difference as much as the steam motors that were launching them.

Humans already knew the machines that are powered by wind and water, since these had been nearby for hundreds of years. The thing that actually fueled the Industrial Revolution was the truth that new machines on assembly lines were using the power of Thomas Newcomen's steam motor.

The steam engine that was invented in 1712, quickened the beginning of the industrial age and was so much more powerful than any mechanisms that are powered by the water- or air-that are found before it.

After machines took over a large part of the work-force, an important portion of the society could concentrate on other things now – and it was this additional time that directed us to the Information Revolution.

As time passed, the machines became more and more efficient, and less hand-operated work was required on the assembly line. As a consequence, people directed their attention to the service sector.

Before 1940, just half of America's gross domestic product (GDP) got from the service sector, however by 1950, that sector was hiring more than half of the nation's labor.

That change, including industry, farming, and service, was showing the beginning of the Information Revolution, a time that would concentrate on generating information and knowledge instead of raw elements.

Considering the Information Revolution is still continuing, we can't be sure about its overall outcomes; actually, it is still hard to conjecture how our labor will seem like in the future.

Yet before looking forward, let's primarily have a closer glance at the way we got to where we are now.

Chapter 2 - Past demonstrated that machines rise the wealth of communities and do not endanger people's jobs.

Have you ever heard the term Luddite? If you chose to live a life without technology you might have. But do you have an idea about the origin of the name?

According to the story, Ned Ludd who is a textile worker revolted against his boss after being whipped by him in 1779. According to Ned's opinion, it was the last straw, and he broke his new mechanical knitting machine for revolt.

The story remained in the public's memory, and the time that textile workers in nineteenth-century England met further automation of their job, they assembled in revolt against the threat to their livelihood, naming themselves Luddites. And similar to the Ned Ludd tale, the workers crushed the new weaving machines in rebellion.

But is technology truly to accuse? If we look at the data, we will realize that machinery usually improves a nation's wealth while the flexible job market modifies.

As machines don't require rest and don't demand payments or benefits, they provide cheaper and quicker production. And with more goods being made, more demand can be satisfied, which ends up in more wealth and more job opportunities in the long run.

Therefore it's illogical to think that mechanization automatically starts the unemployment problem. Nevertheless, there is no constant amount of employment or work to do.

So far, the usual rule has been that the time that communities and firms innovate and turn into a more prosperous one, new jobs are generated.

Now, much more than ever machines are being used. And also, since machines allow us to be more productive and perform new and interesting jobs, people have jobs as the same amount we always have.

Deloitte which is a financial consulting firm analyzed hiring trends going back to 1871 and realized that machines have really created more jobs – principally due to the mechanization of the farming industry and laundry-related jobs, in 2015.

Employees in those areas were suddenly set free to fill the positions of the growing service industry, even teachers, and nurses. From 1992 to 2014, the amount of education and nursing jobs in the United States rose six and nine percent, respectively.

Chapter 3 - As machines are starting to make cognitive decisions, the service sector positions are now in danger.

Until now, machines have brought benefits more than hurt to the job market, so you may believe that developing machines in artificial intelligence (AI) would make everything even better, correct? Not that quickly.

While machines getting more intelligent, in great part thanks to AI improvements like deep learning, the meaning of it is that they finally can take over the very positions in the service industry that we've just started to rely on.

Deep learning is a progress wherein a machine is filled with various data sets and benefits from algorithms to make forecasts and form future judgments grounded on the outcomes of these forecasts. So, we can say that the machine is learning. And the more data the machine receives the more connections the machine can make, and the more capable it turns out.

This is the way machines are learning to improve a variety of human abilities such as speech and display identification.

Geoff Hinton who is a computer scientist and cognitive psychologist, made a team a winner in an AI picture recognition competition, in 2012. By deep learning, their computer recognized most of the images, like clouds, and animals.

That is the sort of information that will allow machines to make informed choices and do human-being jobs, making them more inexpensive and effective workers than people. And some positions in the service industry are already in danger of turning mechanical.

Quill which is a software program, is automatizing some of the fundamental roles in the journalism area by writing Associated Press essays about sports and economic news.

Quill is developed by Narrative Science in 2010, and it can examine data and choose the most suitable parts for an essay. Then, it can create a structure for the essay and work its language-generation software to form the required sentences in a fast way.

That is the proof that even complicated jobs demanding cognitive analysis can be partly or even entirely done by machines. And after a firm started to use them, other ones will be obliged to follow that firm's way or they fall back in their competition.

Chapter 4 - In the approaching future, smart machines and robots will cause lots of service jobs to be out-of-date.

After a new technology became readily accessible, an accelerated shift unavoidably arises. Remember how fast people started to use digital cameras, or how typewriters became out-of-date practically one-night.

Continually improvements being made in AI, we're assured to witness even more rapid change happen in the coming future like the usage of self-driving automobiles.

The DARPA Grand Challenge is A famous competition for self-driving automobiles in the United States and the winner in 2004 was Sandstorm, which was a converted Humvee that just took seven miles before crushing to a rock.

However, lots of things have changed since then: the self-driving cars that Google has created for Lexus and Chrysler have already taken over a million miles on California highways and nothing has created an important difficulty so far.

Specialists are foretelling that public roads will be invaded by self-driving automobiles by the time of 2041.

The meaning of it is that driving tests will become out-of-date, just like will most of the chauffeur and business driving jobs. With lessened accidents on the way, there will be reduced demand in an important way for machinists and rarely be a need for automobile insurance.

So what is the time that you can get your first self-driving automobile? Chris Urmson who is the top of Google's automated driving project foretells that the usual public should have the opportunity of hands-free driving by the year 2020.

The healthcare sector is also an industry that's particularly defenseless against mechanization.

Actually, the first caregiving robot is being used in Japan presently. The robot and also its mother firm is named PARO, and the robot seems like a tiny seal, it has huge eyes and is covered with fur.

Since patients who had time with cute animals satisfied a very important need which is the need for joy, have shown reduced stress and lowered blood pressure, animal therapy has become pretty famous lately. And PARO provides more patients to reach those benefits by contacting the people who don't have access to an actual animal.

The writer thinks that by the year 2041, we'll all have access to technology that will monitor our vital statistics all the time. As a consequence, we'll see a great drop in the request for health workers, as their fundamental functions will be automated.

Chapter 5 - Technology may cause economic contraction and extend the divide among social classes.

There will be a lot of difficulties confronting our society in the future, the economic effect that will accompany a surge in unemployment will not be the least of them.

The time that great numbers of people suddenly become jobless, there will be the following period of economic contraction that might carry society to a crashing halt.

After we put the AI technology into usage, productivity will rise and the prices of goods and services will decrease in that way people maintain purchasing.

But the primary good impact of those changes will gradually decrease and will be followed by an economic contraction that was born because of so numerous jobless people.

In Greece, we saw that happen, 46.5 percent of the young population in the country were jobless.

While families can provide a temporary protection net for their loved ones in conditions like Greece's, there's no example of the sprawling unemployment that is approaching. It will cover all generations, classes, and demographics, therefore, there's no protection net adequately big to halt the economy from worsening under that kind of stress.

A different problem is an inequality among classes that can cause some people to be unable to reach certain technologies and be left behind.

As technology develops in a fast way, there's still a long time before new products become accessible by the general public.

So, let's assume that implants develop that enable wealthy people to improve their bodies and minds so much more than what's probable now. That may cause the social divide to become even worse than it is now via shaping the lives of the rich people so dramatically different so that their access to technology turns them into "superior" people.

We should be working altogether if we will overcome future difficulties, and in the last chapter, we will see how we may just persist.

Chapter 6 - Universal basic income might be the answer, even though unemployment will come with psychological outcomes too.

What do you feel about earning money and not having to work? It may seem like a fantasy, but it can be possible someday for many of us.

That idea is named universal basic income and it may be a requirement in the future while many occupations can be mechanized.

Above all, we all will demand an income, even when advanced AI is doing all of the tasks that keep services running.

A universal basic income provides a set amount to be given to all people, unconditionally or by the thing that is named a negative income tax, a system that works by providing a determined amount of money for assisting you to reach a fixed amount.

That form of basic income welfare has already been tested in some places, the biggest experiment took place in the Dauphin which is a Canadian town, in the 1970s.

The Canadian government stated that each family would get a minimum amount of money every year, without any strings. Adapted toward inflation, they picked that amount as \$16,000 Canadian. So if a family's usual income fell under this amount, the government would give the difference.

From 1974 to 1976, 10,000 people benefitted from the program, and in spite of concerns that it would direct people to voluntary unemployment, just moms with newborns and teens left their jobs completely.

Universal basic income needs to provide more creative efforts, but it might create depression too.

An occupation is a thing that provides meaning to several people's stories, and we can foretell that for sure, about ten percent of the population will suffer psychologically because of being jobless. They'll fall into a depression or run into the virtual reality entertainment world.

Yet the plurality of the people will do healthy attempts to bring delight to their lives, like writing, doing sports, or discovering other imaginative and aesthetic chases.

If we're going to do this, we should be prepared, with plans and arrangements to make a smooth economic transition possible and to block the biggest threats we're sure to meet.

The Economic Singularity: Artificial intelligence and the death of capitalism by Calum Chace Book Review

Unlike earlier changes in history, the information revolution will consequence in having a great effect on employment, making lots of today's occupations considerably out-dated. To prevent a huge disaster, we should plan forward for that urgency and find a solution to organize a strong society that will continue to operate in the lack of a job just like today.

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