

Artificial Intelligence :

Science in the Service of Capital

In capitalist society, said Karl Marx, science becomes “a productive force distinct from labour and pressed into the service of capital”. In the era of monopoly capitalism, ie. Imperialism, scientific research is more organized than ever before, but always with the overriding aim of private profit and devoted increasingly to war. As the scientific research needs today huge infrastructure, the monopoly capital is providing this to gain property rights over the knowledge accumulated by the toil of scientific intellectuals through the system of patent rights. This is imposed on the people of world through TRIPS negotiations of WTO. Thus scientific knowledge became the private property of the giant monopoly corporations, which is being used to augment their profits.

The bourgeois education system separates the training of natural scientists into various branches so that it becomes difficult for them to acquire a theoretical grasp of natural sciences as a whole and receives no training in the study of human society. Conversely social and historical studies are so organized to exclude natural sciences. One cannot say that science and technology itself has class character, but it becomes a cudgel at the hands of exploiting ruling classes to exploit and oppress the people.

Many of the scientists defend this situation by saying that their concern is with the advancement of knowledge for its own sake and not with social consequences of their work. But as the social crisis becomes pronounced under the monopoly capitalist system, many of them are realizing that their work is serving the interests of capital and not those of humanity. The environmental degradation caused by the misuse of technology by capitalism is one instance of such realization and the scientific community started protesting the use of technology for private gains at the expense of society.

From its inception, capitalism has transformed every development in science and technology into an instrument of human oppression and slaughter. The introduction of cotton gin ushered in social misery of 19th century slums of London and Manchester, as recorded by Fredrick Engels. The Spinning Jenny revived slavery in America. The airplane was converted into a method of killing people through “strategic bombing” as they called it. And the limitless energy created by the nuclear fission was turned into a means of destroying entire societies, which even today is being used as a bullying weapon to cow down the people of the world.

The monopoly capitalists who rule the society turns every techno-logical and scientific innovation into a weapon to suppress the working class in their country and against countries they seek to conquer and suppress through military means. The latest such innovation is artificial intelligence (AI).

The concept of what defines AI has changed over time, but at the core there has always been the idea of building machines which are capable of thinking like humans.

Human beings have proven uniquely capable of interpreting the world around us and using the information we pick up to effect change.

AI can be thought of as simulating the capacity for abstract, creative, deductive thought – and particularly the ability to learn – using the digital, binary logic of computers.

Research and development work in AI is split between two branches. One is labelled “applied AI” which uses these principles of simulating human thought to carry out one specific task. The other is known as “generalised AI” – which seeks to develop machine intelli-gences that can turn their hands to any task, much like a person.

Research into applied, specialised AI is already providing breakthroughs in fields of study from quantum physics where it is used to model and predict the behaviour of systems comprised of billions of subatomic particles, to medicine where it being used to diagnose patients based on genomic data.

In industry, it is employed in the financial world for uses ranging from fraud detection to improving customer service by predicting what services customers will need. In manufacturing it is used to manage workforces and production processes as well as for predicting faults before they occur, therefore enabling predictive maintenance.

In the consumer world more and more of the technology we are adopting into our everyday lives is becoming powered by AI – from smart phone assistants like Apple’s Siri and Google’s Google Assistant, to self-driving and autonomous cars.

Generalised AI is far away – to carry out a complete simulation of the human brain would require both a more complete understanding of the organ than we currently have, and more computing power than is commonly available to researchers. But that may not be the case for long, given the speed with which computer technology is evolving. A new generation of computer chip technology known as neuromorphic processors are being designed to more efficiently run brain-simulator code. And systems such as IBM’s

Watson cognitive computing platform use high-level simulations of human neurological processes to carry out an ever-growing range of tasks without being specifically taught how to do them.

The artificial intelligence will bring many changes. As ride-sharing companies and shipping lines moves to use driverless cars, trucks and boats, tens of thousands of jobs will be eliminated. The integration of artificial intelligence with robotics will extend the wave of mass automation that has already displaced thousands of workers in every sector of the economy. According to a survey by Oxford University, nearly half of US jobs will be destroyed by AI and robotics in just the two decades alone. The assurance that more jobs would be created in newly emerging sectors is only a ploy to conceal the menace of unemployment that is being ushered in by the AI.

Already, AI is being used at Amazon warehouses to track every move employees make. Amazon's systems count how many times workers go to the bathroom, and alerts foremen if workers stop to take a breath in around 15 miles they had to walk in a single shift. At companies such as Ola, AI is used to push drivers to work longer and harder jeopardizing their health.

The use of AI for mass surveillance and war is evident in the drone assassination programme of US imperialism. The Google, Face book and Twitter hired thousands of professionals with military and intelligence background to analyse the drone footage and identify individuals and objects in targeted areas. Last month, 3000 employees of Google signed a letter taking a stand against Google's collusion with US's drone assassination programme which has killed and maimed tens of thousands of people throughout Middle East and North Africa. They demanded withdrawal of Google from 'Project Maven' – drone integrated mass surveillance programme of US military and they called for the adoption of a policy stating that "neither Google nor its contractors will ever build warfare technology".

The development of science and technology has to relieve humans from routine, repetitive and back breaking work. A worker can produce more with the use of machines. This has to lead more leisure time which the worker has to utilize for cultural development. Instead, adoption of newer technology has been leading to unemployment under capitalism.

This is hotly debated topic. The job losses due to new technology, argue some, will be compensated in the emerging sectors. But reality is otherwise. The displaced worker is not in a position to gain as he lacks skills needed in the emerging sectors. This is so, as many studies revealed, even after retraining of the workers. Secondly, the new job opportunities are being created in the service sector and not in the manufacturing sector. This will have a negative effect on the overall economy.

Even there is a more vacation time for certain job holders, the capitalist system has already made the leisure time into a commercial good. Utilising the leisure time for the educational and cultural development of workers and their families has become a mirage under capitalism. As the culture is being increasing made into a profit churning commercial activity under capitalism, the worker is being forced to 'kill the time' through what is being called the entertainment industry. Ironically the capitalist system is bemoaning that work is suffering as the workers are absconding and/or attending with hangover effects after killing time during the week end.

On the contrary, in a socialist society, the artificial intelligence and robotics revolution will create the circumstances for a massive elevation of not only the economic well-being of the population, but also its cultural life. The replacement of tedious and back-breaking occupations will mean not mass unemployment and destitution, but rather greater leisure and an expansion of workers' opportunities for education, family life, and cultural enrichment.

The automation of the construction, and the expansion of additive manufacturing (3D printing) to construction, will vastly reduce the amount of labor required to build homes, schools and hospitals and ensure excellent housing for all. The leveraging of artificial intelligence in gene sequencing, drug development and analysis of medical studies will result in unprecedented breakthroughs in human health for the whole of humanity, not just the few who can pay for soaring drug prices, as under the capitalism.

The roboticization of both farming and transportation will vastly reduce the cost of food, ending malnutrition and ensuring a high-quality diet for all—not the ruin of small farmers by agriculture conglomerates.

The question is: Who controls the means of production and thus society?

Two roads are open to humanity. The capitalist road offers a relent-less escalation of war, poverty, mass repression and totalitarian dictatorship. The road of socialism offers not just the freedom from all those horrors, but the liberation of all mankind from oppression and want.

Until the productive forces, including the science and technology, are made into a common property of society, Scientific and technological innovations continue to serve the capital and artificial intelligence is an exception to this. Let us move ahead towards building a socialist society that applies science for the benefit of human beings.
