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The Emerging Roles of Science and Technology in Environmental Challenges

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ABSTRACT

The paper highlights on science and technology to showcase how humans have evolved over the years. One of the most pressing issues in science and technology today is the ethical implications of emerging technologies such as artificial intelligence. Science and technology have a profound effect on social life. In the modern environment, everything is interlinked. The rapid pace of technological development leads to increased consumption of resources and the generation of electronic waste. Science and technology is partly responsible for many of the problems that face us today. Science, technology has made the life safe, secure and comfortable. Today we are totally depended on science whether it is inside or outside home.

Key words: science, technology environment, inventions, discoveries, communication engineering and pollution

INTRODUCTION

Science and Technology have introduced us to the establishment of modern civilization. Advancement in Science and Technology has given man power fit for god yet he can t be god unless has peace of mind inner satisfaction respect for moral ethical and spiritual values Today science and technology come to play key role in almost every branch of human activity. The Wondrous advancement of science and technology in different spheres has completely changed the pace of way of living of the present society. IF our forefathers could rise from their grave they would be amazed and bewildered to see the present world. In the field of education health transportation banking, defense, communication the progressive use of newer scientific and technological equipment, have changed the means and modes utilizing and energy of present society.

Every new invention has its merits and demerits. Invention is itself a blessing or a curse, it is its use which the human being does to make it a blessing. The higher food production and better quality of food grains are possible due to rapid progress in irrigation facilities and by the use of hybrid seeds and technically very easily operable tools and machinery. “Technology is the application of conceptual knowledge to achieve practical goals, especially in a reproducible way” (Skolnikoff, Eugene B. (1993:13). Today agriculture is to a great extent free form the vagaries of nature, rain or no rain scant rain or excess rain, in any kind of weather a good production is ensured at least in developed countries. Dependence on wind, sun for air and light has since been a matter of ancient past. Comfort by coolers, AC and light through electricity has become very common .In the field of education, the distance learning through satellite, the on line education, the progressive use of internet is also a common feature.

Sitting in India, one can well be taught by a professor delivering lecture in USA and can also put questions with the help of technologically advanced devices. “Education provided by the government of India was free and compulsory up to the Age of 14. More emphasis was paid to the enhancement of vocational and technical skills. J. P. Naik, member-secretary of the Indian Education Commission, commented on the educational policies of the time”(Prabhu 2006:81)

The mindboggling advancement the field of communication has brought the whole world in a small room. The network of satellites, computer network, internet, have decimated all the geographical barriers and brought the world so closer that one can communicate with a person sitting at millions of miles away through video conferencing as if looking face to face. “The ethics of technology is an interdisciplinary subfield of ethics that analyzes technology's ethical implications and explores ways to mitigate the potential negative impacts of new technologies. There is a broad range of ethical issues revolving around technology, from specific areas of focus affecting professionals working with technology to broader social, ethical, and legal issues concerning the role of technology in society and everyday life” (Hansson, Sven Ove 2017:40)

The tremendous advancement in nuclear technology, medical science, biotechnology etc. has made almost everything possible. The technology advances forecasting of weather, surgery of brain, heart transplantation, heart valve change, planting of everything possible. The forecasting of weather, surgery of brain, heart transplantation, heart valve change, planting of every human organ including eyes limbs and every bone has made a man more than immortal. The progress in bio-science in genetic engineering has made the man envying with god.

In the field of space technology, the moon, mars, has since explored by the man and efforts are being made to explore the other hidden secrets of universe. Everyday new stars, new space bodies are being discovered. In addition to the inventions and discoveries made by science and technology, it has made the human life full of comforts and luxuries, all kinds of entertaining mode are available at hand. “When it comes to the relationship between society and advances in science and technology, the perspectives of the boardroom, the statehouse, the federal agency, and the community are as important as that of the laboratory."(Austin, David; Macauley, Molly K. 2001) A very important aspect of advancement in the field of science and technology is the analytical reasoning and removal of various orthodox cal and superstitious beliefs thus enlightening the common people. “In addition, corruption and inefficiencies in the research sector and have resulted in corruption scandals and undermine innovation initiatives” (Reddy, Prashant, 34) .

Science and technology has given the man power fit to be the god yet he could not as by vagaries of his mind, lust for becoming almighty, he has put the world at the threshold of ruin. The science and technology bas done wonders in inventions of warheads, nuclear and atomic weapons, space warships thus putting the entire world at ruinous peril. “Technology ethics encompasses several key fields. Bioethics looks at ethical issues surrounding biotechnologies and modern medicine, including cloning, human genetic engineering, and stem cell research. Computer ethics focuses on issues related to computing. Cyberethics explores internet-related issues like intellectual property rights, privacy, and censorship. Nanoethics examine issues surrounding the alteration of matter at the atomic and molecular level in various disciplines including computer science, engineering, and biology. And engineering ethics deals with the professional standards of engineers, including software engineers and their moral responsibilities to the public” (Luppicini, R. 2008) A switch can destroy the whole world. We had seen the devastation and destruction caused by the atomic bombs in Hiroshima and now there are more scientific more accurate warheads available that can destroy the whole world within an hour. The invention of chemical weapons has also jeopardized the whole civilization that may put the humanity in danger of incurable diseases.

The rapid progress in genetic engineering can make it possible to develop clone of human being the disastrous effect of such invention can ruin every fabric of morality, ethics and the civilization. “Pollution, the presence of contaminants in an environment that causes adverse effects, could have been present as early as the Inca Empire. They used a lead sulfide flux in the smelting of ores, along with the use of a wind-drafted clay kiln, which released lead into the atmosphere and the sediment of rivers” (Smol, J. P. 2009:35)

The fast development in science and technology has put the balance of nature in great danger. The present day, air water and noise, pollution, the gradual global warming, has put the existence of world at stake. With rapid industrialization particularly in developed countries has resulted into imbalance in ratio of carbon –dioxide and oxygen in the environment. As per the report of Hadley centre U.k., by 2050 the trees and soils will start falling and perishing due to Global warming if no corrective measures are taken. “In 2005, futurist Ray Kurzweil claimed the next technological revolution would rest upon advances in genetics, nanotechnology, and robotics, with robotics being the most impactful of the three technologies” (Kurzweil, Ray 2005:42)

In pursuit of materialistic prosperity, we have been going for more and more unplanned industrialization that has resulted not only air pollution but also water pollution. Rivers, the natural source of pure and hygienic water, now become so much contaminated that even the water creatures, fish, tortoise, etc are at the verge of extinction. “Autonomous robots have undergone rapid progress, and are expected to replace humans at many dangerous tasks, including search and rescue, bomb disposal, firefighting, and war” (Lee, Sukhan; Suh, Il Hong (2008:3)

Forest are decaying gradually, many species of wild animal have become a matter of past. Undoubtedly science and technology has given the man, much luxury, comfort, material prosperity, but wealth and prosperity is not the ‘be-all and end-all of human life. Is there any material benefit more precious than life and material loss mare awful than death. The worst curse of advancement in science and technology is that man has started feeling himself almightily and ignoring the spiritual and human values. The man has lost his peace of mind, the inner satisfaction, the value of ethics in the realm of new and newer advancement in science and technology. What purpose all the material and physical prosperity serve if we have no peace of mind, no inner satisfaction?

CONCLUSION

Technology is a tool that can be used to solve real-world problems. Modern technologies comprise the latest advance in engineering, hardware, systems, and organization methods. In brief, science and technology has brought both good and evil to the present world. No invention or technological or curse. Machines are created for the luxury and comfort of man, if we use them to destroy others, they become curse, otherwise machines are blessing. It is the man, who has to ponder over the question what he wishes to make the world a heaven or a hell; it is his decision which makes the science and technology a blessing or a curse.

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