

Science and its limitations



Nowadays every person in the world knows and understands the tremendous progress that science has done and still is doing for our life. This essay is about the limitations of science as science does not provide answer to most of the questions this seems to be that science is limited. This essay is also about when science is beyond the limits then it provides danger and threat to the world. As Science has made our life comfortable and easier but has also bad effect on our life. The scientific inventions which are developed due to science help us in almost every aspects of life when the scientist's works within limitations keeping regards of social responsibilities and human moral values. But when the scientists do not care of their social responsibilities and human moral values then these scientific inventions provides threat and danger to human life. In this essay we will discuss both sides of science that is its positive effects as well as its negative effects on our daily life.

Introduction:

If we want to know that what science is, it will be a good start to familiar with the common content of the concept. Today most of the activities are characterized as “ science”, while some of the other activities are characterized as “ pseudoscience”. It will be good for one who has to clear himself what he actually means via the words that he using [1].

Science covers a vast area of knowledge dealing with experimental facts and the link between these facts. The word science is derived from Latin word “ scientia” means knowledge. Imre Lakatos defined science as a genuine knowledge [2].

The most modern definition of science according to late Sir Richard Gregory is “ Organized and formulated knowledge of natural objects and phenomena derived from verifiable observations and experiments” [3].

So the knowledge gained from these observations is used for the creation of new scientific inventions. Some of these scientific inventions provide benefits to us while some of these provide us threat and danger.

As we know that the process of producing knowledge is called science. This process depends on observations and the invention of theories that make sense out of these observations. Since the change in knowledge is expected that is new observations may confront existing theories. That is it does not matter how a theory explains one set of observations, it may be possible that the other theory is the more suitable. In science either a theory is old or new, testing, improving and occasional removing of theories goes on every time. In science the ideas are modified normally rather than rejection. For example, “ In formulating the theory of relativity, Albert Einstein did not discard the Newtonian laws of motion but rather showed them to be only an approximation of limited application within a more general concept”[4, 13].

Science considers the universe as a standalone system and assumes that the fundamental rules are the same everywhere and the knowledge that is achieved after studying one part of the universe is valid to all parts of the universe. For example the laws of motion and laws of gravitation that gives explanations of objects that fall down on surface of the earth and also give details about the motion of the planets and the moon. After a couple of year some modifications has being made and the same laws of motion have

applied to everything that has motion even to the smallest nuclear particles and to the very big stars, and to bullets and rays of light [4, 2].

“ In scientific reasoning, theories are confronted with facts; and one of the central conditions of scientific reasoning is that theories must be supported by facts” [2].

Now to explain that how these facts support theory, different answers have given by the scientists. Newton proved his own laws with the support of facts. He published only the theories that are proved from facts [2].

Science brings to our mind various different images, a heavy text book, white coats and microscope. An astronomer observes via a telescope, the Einstein equations scrubbed on a black board and the launching of space shuttle, bubbling beakers. Some aspects of science are reflected from these images, but however none of them provides the full image because science has many facets [5].

In school science is just a collection of isolated facts that are available in the text books but this is not the complete story that is because science is a method of discovery and allows us to understand the world from these isolated facts [5].

Science is a method of discovering that what things are present in the world, how these things worked in the past, how they are working today and how these things will be working in the future. Scientist works hardly to discover such things that no one has discover before [5].

The knowledge gained from science is reliable and powerful. The knowledge developed from science help us in the invention of new technologies that's makes our life easier and comfortable like treating danger diseases, and also solve many other problems. Science is constantly exploring the knowledge of the universe and this knowledge generates more new questions in our mind [5].

The role of Science in our daily life:

Science has a great effect on our life and in the world in which we are living. Today science is the base for modern technology, materials, the tools, techniques and much of the power sources that make our life more comfortable and easier [12].

Science has given rise to far-reaching changes in all areas of our daily lives. Now everyone can afford to gain the benefits of luxury and comfort offered by science. Science has made goods cheaper and easily available and has brought within reach of every individual. It is only possible due to science that music devices, entertainment devices and communications devices are available at our doors. No doubt the man's life is very different than it used to be a few years ago. Indeed, science has given ears to deaf people and eyes to the blind people [6].

Our life has been changed by science and technology in a dramatic way. Computer, airplanes, automobiles, televisions, communication satellites are few of the technological and scientific invention that changed our life. Today we communicate with relatives and friends, some important people and also for general work. Most of the people living at long distances are contacted

and this long distance has been captured by science. So this communication and travelling are possible in very short time. That is for communication we are using telephones, mobiles, internet, e-mails etc, and for rapid travelling we have aero planes. The deep and long water are also conquered by ships and these ships are perfect for secure journey [12].

Health is wealth. This is made possible with modern machinery. Science has invented ways to peep inside the human body to fight against diseases in human beings by X-ray machines. Diseases can be easily detected and various tests carried out in a matter of seconds. Due to science machines are invented and more complex operations are possible due to these machines. Life does not turn into new horizons and heights of prosperity when atomic energy is used entirely for peaceful purposes [6].

One major contribution of science for us is electricity. If there is no electricity in our daily life then we must face completely darkness at the night time. Without electricity no industry could function properly. It is due to electrical energy we can control the climate changes and their effects. We prevent our self from cold in winter by the help of heating gadgets and in summer prevent our self from heating by the help of coolers, fans and air conditioners all these devices operate due to electricity. Today one can enjoy in cinema to release the tension of the daily life this is due to electricity [6].

Now almost every house has a television and radio which are fastest source of communication that is due to science. Science made our daily life more smooth and comfortable. The modern world would become idle without scientific inventions. As we know that the world our facing shortage of

spaces so scientific inventions helps us in the construction of high buildings that are use for residential and commercial purposes. The lifts are using in these buildings that made our life easier because we can go to the highest building in just few seconds [6].

The house hold wife can cook several dishes at the same time that is due to electric machines used in the kitchen. Thus she saves her precious time and is capable to spend her time in many activities concern with family life. Similarly due to automatic machines she can wash the clothes in just few minutes and also dry it in few minutes [6].

So looking at the above advantages of science, science are playing important role in our daily life.

Science does not give answers to most of the questions:

Science is a best tool for solving the mysteries of the universe, but there are some questions for which the science does not answer. This is because science has some limitations. Some of the questions for which science has not a testable answer, since we know that testability is the major point of science so these questions drops out from the area of science [7]. Some of these limitations are

Science has no answer for questions of morality that is it cannot decide the right or wrong decision, good and bad decision lies outside the purpose of science. Therefore scientific experts cannot help us to resolve the problem over abortion. The answer to these questions of morality can be determined by social and cultural rules. Science cannot help us here [7].

Science has no answer for questions about value. In scientific process there is no answer to the questions. Which of the flower is more beautiful? Or which flower has good smell? So there is no scientific process to determine value [7].

Science does not help questions related to supernatural. The prefix super means above. Thus supernatural deals with beyond the nature, supernatural questions are beyond the reach of scientists [7].

Science does not deal with metaphysical issues; there are some issues in which cannot be proved by scientific experiments. As we know about the existence of gravity and the effects of the gravity can be describe but no one knows why this gravity works [8].

Science can tell us about the laws of physics but cannot explain why these laws existed [8].

Science cannot explain us that why the universe is existed and lastly science cannot explain that whether God is exists or not exists [8].

However these limitations of science cannot be modified by the advancements of science in future because they are basic to its nature so in the future we can expect major advancements of science [8].

Dangers of Science when science crosses the limits:

As we know that today world is called the age of scientific inventions, a lot of scientific inventions have been developed and the process of making these scientific inventions is still continued. Since the scientists are working hardly to develop more new inventions in the field of science and to make our life

easier and comfortable. But no one can think about the dangers of these scientific inventions that are related with these inventions. As science has brought happiness to our life but has also brought threats and costs to our life. Most of the questions that generates in our mind are that, Can we know about the future of science? Are there any limitations of science? Who and what decide how science is used? [10].

There are various dangers effects of the scientific inventions for example the invention of an atomic bomb. Millions of peoples were killed by the first attack of atomic bomb when two popular cities of Japan were destroyed in the 2nd world war. Peoples of these cities are still suffering from the dangerous effects of these atomic bombs radiations. Mass destruction is another danger effect of science and many countries have still these chemical and atomic weapons. These are the big dangers because these countries are ready and can use these weapons anytime [9, 6].

Global warming is another dangerous effect and most of the people are unaware from it. The earth has a shielding cover called the ozone layer which protects the danger ultraviolet radiation produced from the sun. That is as the numbers of vehicles increases in the world the consumption of petroleum products is also increased and in the atmosphere large number of waste products are released. This is the main cause of global warming. As we know that some gases are released by refrigerator and air conditioner that create holes in the ozone layer. Change in the climate is the direct effect of global warming and in Antarctic region the melting of ice that increase the sea level is the indirect effect of global warming. Our future

generation will be badly affected by the consequences of this global warming [9].

Many controversies have been created by the research on the embryonic stem cells. Most of people understand that embryonic stem cells like a form of human life. These people consider that science has no name for human morality. Today there is a great debate on cloning which is another scientific invention. Due to cloning it is possible to make human beings that have same characteristics to the giver of the stem cells. But this cloning process is challenge the fundamental human morality [9].

Today we are living comfortably due to scientific inventions. Similarly we cannot think life without telephone, electricity, cars, computer, televisions and thousands of many other scientific inventions thus we cannot deny the benefits of scientific inventions. We live longer that is due to the latest research done in the field of medical sciences. As we know that there are a lot of benefits of scientific inventions but we cannot ignore the danger related with these scientific inventions. This is a human nature to seek immediate solutions to problems without the awareness of concealed consequences. That is we cannot think about the danger bees inside the honeycomb we also see the honey on the outer surface of the honeycomb. This is same with scientific inventions we want refrigerators and cars but we do not think about the global warming as this is a great cause for global warming. We only wants nuclear energy and do not think about the dangerous results and the safe disposable of nuclear wastes. We do not think about the loss of natural resources we just want wooden furniture, paper and houses [9].

So it is the responsibility of the scientists to create scientific inventions they should be aware about their consequences. Scientists should warn up about the dangers in the future that are arises due to their inventions [11].

No doubt science has made our life easier but still the danger and bad effects of science cannot be ignored. We use nuclear energy for power purposes it is due to the successful research of nuclear scientists but the dangers associated with these nuclear power stations are very danger for the humanity and cannot be ignored. Because in just few seconds it will destroy our beautiful world in which we are living.

Now to protect our world from these scientific inventions there should be some limitations?

It is possible when we can look at the scientists and observe them when they are doing research. The government should play their role to stop the scientists that are doing such research and developing scientific invention that provides disasters to the world. That is to make restrictions on them to not develop such inventions and observe their work every time.

Conclusions:

I agreed that scientific inventions provide us a lot of benefits. We are taking benefits from these scientific inventions and enjoying our self but we should also have look on the future effect of these inventions. My opinion is that if we look on long term of these scientific inventions most of them are dangerous for us. Most of the scientific inventions needs electricity to provides entertainment to us and also make our life easier. But we do not think for our next generation because for producing electricity we are

depending on natural resources and we are fully utilizing these natural resources so what be remained for our next generation. If scientists work within limits that is to make such inventions that do not provide harm and bad effects to human life and utilize the natural resources up to some limits then science will be more effective. However if scientist do not think about the future of the next generation and cross their limitations that is to develop such scientific inventions that provide harm to humanity then there will be disaster everywhere in the world. Since it is the social and ethical responsibility of all the scientists to make such scientific inventions that only provide benefits to the humanity and that they are being aware of the consequences and results associated with these scientific inventions.