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## Impact of science on society

**Rajanna C and Harish R**

### Abstract

Impact of science on society is very visible progress in all the areas and it has change our daily life. Its impact is also observed with major requirement like food and health and also the impact viewed on the chemistry in the field of medicine, field of metals, field of ceramics, agriculture, industrial, petroleum, plastics, textile, in food preservation, field of environment and also with democracy. In this way the impact of science on society play a significant role in the development of human race.

**Keywords:** Ceramics, impact, plastics, medicine, detergents, alizarin, sulphide

### Introduction

Science is a great blessing to mankind. Though modern science is of relatively recent origin, having started with Galileo about 350 years ago, it has made very rapid progress and completely transformed outwardly the manner of our living. It is said that our life outwardly has changed more in the last one hundred years than it did in thousands of years earlier, because of the scientific knowledge accumulated over the last three centuries and its application in the form of technology.

So the impact of Science on society is very visible progress in agriculture, medicine and health care, telecommunications, transportation, computerization and so on, is part of our daily life.

In spite of all this consequent development of technology and industry, and the conveniences, comforts and power we have got through this knowledge, in no part of the world are human beings happy, at peace with themselves, living without violence. It was hoped that the development of science would usher in an era of peace and prosperity, but that has been belied.

Science is a faithful servant of man; it accompanies us in all walks of life. It is like a servant in the home, in the field, in the factory. It helps at every attempt in life. Never was then a more helping servant and not keep him in proper control that he may some harm to us but it is our own fault. A servant has to be kept always under control.

Science has changed our daily life part are days which invites only rich men. Could afford luxuries, Science has made them cheap and has brought them within the reach of everybody.

Science is our most faithful medical attendant; it shows every case for our health science has cured us of many diseases. At has given us the strength to keep epidemics under control. No longer as small pox, cholera and plague, the savages of mankind. Science gives us power to kill germs, which spread these diseases. There are hardly any diseases today which can be called incurable.

Science has made a travelling pleasure. No longer do we need to part sadly to our relatives, and friends.

When we go pilgrimage. Science has annihilated time and space. Trains soar through deserts and jungles and man travels with safety and speed. But today, the train and motor vehicles have become outdated means of transported. The aeroplanes fly across thousands of kilometre and hour you can take your breakfast in Kashmir and lunch at London. And take your dinner in Newyork. The work of months and years is completed in hours.

Human beings use the knowledge gained by science and decide what kind of application to make of it. If there is no wisdom, we are violent and selfish, and use knowledge in a destructive way. If there is wisdom, we will not use knowledge for destructive purposes. History shows that man has used it and is still using it primarily for destruction rather than for construction, bringing our planet and our lives to a level of danger which never existed before.

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Scientists are pointing out that the third world war would be the lost, if it takes place. So is there anything we can learn from science as theosophists interested in wisdom, in coming upon deeper understanding of life.

### **Impact of Science**

The knowledge of biological science has benefited the mankind some of its effects are:

**Food:** Food is a major requirement for all human beings. Our country is a thickly populated country and growing and supplying adequate food for all citizens is a major problem faced by our governments. The knowledge of biology has helped the farmers as well as scientists to develop better quality seeds, healthy, agricultural practices, resistant varieties, hybrids pest control, techniques and obtain a better yield of food grains. Adequate advanced techniques like tissue culture, production of synthetic seeds and bio-control techniques can also be explained to the farmers to obtain better yields. The growth of poultry and aquaculture is the result of biological science.

The knowledge of biology has helped in the green revolution and white revolution in our country.

**Health:** The knowledge of biological science has revolutionized the field of medicine. It has improved the value of human life and increased the human lifespan. The research in this field has resulted in developing vaccines and medicines for eradicating the dreadful diseases. Here we can quote the eradication of diseases like smallpox and control of plague and others. We have recognized that importance of balanced diet and have developed methods to control malnutrition and mineral deficiencies by taking appropriate food. New inventions in pharmaceutical fields led to production of new drugs in the areas of cancer, heart, oilments, AIDS etc. Bringing a ray of hope to the ailing development of microsurgery, Laser surgery and non-invasive surgical techniques have made surgeries simple development of advanced diagnostic techniques have helped in the identification and cure of diseases.

Advancement in life sciences has really helped in improving the standard of health in the human beings.

The knowledge of science helps in educating the people about problems of over population and importance of population control. The need for family planning and advantages of small family, importance of health of the mother and child etc. are all understood by the knowledge of biological science.

Today is the age of biotechnology every individual has focused his attention on producing something from biological organisms. The development of alternative sources of food the algal proteins from single cell cultures of chlorella and spiralling have already taken place. Biological control of pests and diseases, production of bio fertilizers in the place of conventional chemical fertilizers are the result of advancement of science and technology.

### **New inventions for improvements of living beings**

Great advancement has occurred in the field of genetics resulting in the development of many scientific techniques, which could open new vistas of knowledge relating to the basic chromosome structure DNA and RNA. This resulted in a vast exploration of biological principles, pertaining to plants, animals and man. The advancement concepts DNA

finger printing, Eugenics, preservation of the gene pool, chromosome mapping etc. Are the results of this explosion of knowledge. There have resulted in identifying genetic disorders etc.

These have resulting in identifying genetic disorder improving plant and animal gene pool and mapping of human gene. The human genome project is the culmination of the efforts of all scientists which when completed will bring an all-round development of human life.

### **Impact of Chemistry on daily life**

Science is a cumulative and endless series of empirical observations which results in the formation of concepts and theories with both concepts and theories being subjected to modification in the light of further empirical observation.

As has been said that science has gone deep into our everyday affairs. We are living in an age of science and all over activities are controlled and governed by science just sit in a modern room and you will feel how science adores us and given comfort.

Everything around us directly or indirectly consumes sciences. It has changed the whole pattern of society and has affected the social as well as the physical environment.

Chemistry is considered as an important subject in school curriculum as many professional and applied courses. The present age is the era of science and more number of people is being employed in scientific per suits.

The most significant aspect of modern science is the impact. It has in shoeing a variety of problems of practical and technological importance as well as those related to the pressing problems of mankind.

A large number of these problems require a proper understanding and application of chemical principles and processes. Chemistry has made a significant contribution in the field of drugs fuels. Agriculture, animal farming fibres etc.

In addition to these are many other interring disciplinary areas where the contributions of chemists are significant. In the area of environment pollution. Chemists are finding better methods of analysis and solution to get a rid of pollution. There is the entire area of marine chemistry to investigate new sources for food and chemicals.

The following are the contributions of chemistry in the following fields

### **Impact of chemistry in the field of Medicine**

Many substances from natural resources have been used since times immemorial for the treatment of diseases for example an extract from the bark of poplar, willow trees were recommended more than two thousand years ago by "Hippocrates". The father of medicine for treating fever at present we can isolate and purify the drug from natural sources and establish their chemical structure. Sparsely occurring substances can be synthesized in the laboratory and in this way made available in abundance more over even such drugs which do not available occur in nature have also been obtained by synthesizing them in the laboratory.

Aspirin is are of the earliest synthetic drug salvarasam was synthesized for the treatment of syphilis some other prominent synthetic drugs are sulpha drugs, antibiotics, anaesthetics, anti-malarials and wonder drug writs one. Due to all these progresses in the field of medicine the death rate has decreased.

### **Medicine field**

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Some chemicals are used to prepare many medicines drugs. The discovery of 3A's that is antibiotics. Antiseptics and anaesthesia.

### **In the field of Metals**

Today we are making use of so many metals like in iron, steel, bronze, copper, gold, and platinum in wide variety, because of study of metallurgy which deals with the extraction and purification of metals. There are different methods to extract different metals from their ores.

Metals like copper is used in electric wires, aluminium is used in making the parts of aeroplanes due to its light weight. Iron is used to make windows doors, in alloys to give different properties and shapes etc. gold is used to make jewellery due to its non reactions and now a day platinum is also made use which is more costly than gold.

In the present life what we use in according to our desirable needs and fashions are all because of science. Specially impact of chemistry in the field of metals. Metals are very necessary to our daily life. In kitchen rooms are instruments are made up of metals, in a classroom, house, hospitals, and industries having a different material of different metals.

### **In the field of ceramics**

Ceramics are the non metallic earthy products mixed with suitable components and baked by fire and porcelain ware, building bricks etc. There are used for making decorative pots, vases in building houses in floors (tiles) etc.

Ceramics can be manufactured by using some of the chemicals like boron, sodium, nitrate, soda ash, oxides of iron, lead, aluminium, manganese etc. with clay feldspar and sand.

### **Agriculture field**

Chemistry have done a lot to increase food grain production and helped to bring about green revolution. Synthetic fertilizers were developed which provided the essential elements for growth of plants use of fertilizers led to higher yield of plants insecticides weed killers fungicides developed by chemists have contributed a lot to increase the availability of food grains for the making. In many countries formers use laboratories made chemicals as defoliant for example magnesium chlorate applied to ripened cotton crop causes the leaves to fall of these making harvesting much easier, cheaper and faster.

Chemicals are also used in animal farming for example Mariate a new insecticide used as a drip as a spray kills blood sucking horn flies this step leads to 10% increase in milk supply.

Play an important role in human life decreasing death rate and assisting painless surgery patient recovery with short time apart from analysis of antiviral antibacterial all ahs contributed for curing and preventing the disease. This have also include in increased level of sanitation and prevention of diseases.

### **Industrial field**

Now a day we are producing synthetic fibres like nylon, rayon and terylene. These fibres in some respects excel the natural fibres. They are longer lasting crease resistant and quick drying.

Till the middle of this century only naturally occurring substances such as wood, coal, coke etc. were used as fuels but now the situation has been by processing the petroleum petrochemical industry also provides many useful chemicals like benzene, foluene, xylene etc.

Today we are making use of many metals like iron, steel, bronze, copper, gold, silver, platinum etc. almost all the world uses many metals for the construction of houses, buildings, factories, automobiles, aeroplanes, rockets and also for domestic purpose ceramics are non metallic earthy products used in paroling, pottery, insulator materials etc.

Chemicals play a very important role in manufacture of cosmetics like face powders, perfumes, face creams nail colours, hipstics etc.

Soaps and detergents also used by all these are manufacture by the hydrolysis of oils and fats with sodium/ potassium hydroxide. This reaction is called sophonification. Apart from this many sit in a modern groom all the comforts for enjoy like T.V. fan, refrigerator, kitchen articles, furniture's. Each and everything has got touch of chemistry.

### **Impact of chemistry in petroleum field**

Till the middle of this century only naturally occurring substances such as wood, coke, coal etc. were used as fuels but now the situation has been completely changed by processing the petroleum products. Petrochemical industry also provides many useful products like benzene, folene, xylene, naphthalene etc.

Petrochemicals provide the base of synthetic fibres rubber, resins, detergents, refrigerants and also explosives in the extraction and refining of petroleum fuels chemistry play a very important role.

Till the middle of this century only naturally occurring substances such as wood, coke, coal etc. where used as fuels but the situation has been completely changed by processing of petroleum petrochemical industry also provides many useful chemicals.

### **In the field of plastics**

Now a day's plastic is in wide use, plastics are made used in difficult term like covers, bags, pipes, sheets, tubes, buckets etc. These replace the use of wood can metallic items. Now a day's biodegradable plastic are also prepared which are little bit control the global warming.

Plastics are prepared by making use of some chemicals. Examples for plastics are P.V.C, polythene etc. there are also made used in preparing glass, which are used in preparing glass which are used in the buses, cars all most all vehicles.

### **Textile fields**

Polymers play a very important role in textile industry. Instead of using cotton now a day a lot of synthetic

polymers are induced because. These textiles are hard in nature does not fade do not need ironing and it can be easily cleanse and dried in a short period. We have got varieties of cloths for men and women with wide range of colours, blankets, furnishing etc. are all the products chemistry.

#### **In preparation of oye**

Oye's are coloured organic compounds having the property of improving their colour to other substances, such as to fibres, many dyes like malachite green, Alizarin, Indigo and many other shaded of different colours are prepared by making use of different chemicals.

Chemicals are used in preparing colours which are give desirable and beautiful colour to our clothes, ornaments, things, tiles, metals, jewellers etc. So days are playing an important role in our daily life.

#### **In food preservation**

Some chemicals substances are made used to preserve food substances they are

Sulphide - Used to preserve raw vegetables and fruits.

Sugar – Used in the preservation of jam and gullies.

Salt – Used in the preservation of pickles.

#### **In the field of environment**

The whole world is environment is made up of chemistry only. The Mountains Rivers, animals, birds, and insects in everything we find chemicals. The air we breathe water we drink, we grow food. Everything contains one of the elements apart from this we can see the involvement of chemicals in all manmade materials so we can say that chemistry is universal.

In the area of environmental pollution chemists are finding better methods analysis and solution to get rid of pollution. International environment scientists and also Indians are working for creating awareness among people about the environment.

#### **Impact of science on democracy**

Science has been changing our attitude we have development the qualities of a good citizen for democracy. Science help us to develop an outlook for receiving new ideas and to have a capacity for clear thinking science also develop in us a feel to work for the service of mankind and also to respect the view of others. It also develops over intellectual integrity. The knowledge of science helps an individual to find useful methods for checking the bias.

#### **Impact of science on biotechnology**

Science and biotechnology has a profound impact on all of humanity's activities science and technology inventions and discoveries, including the theory of the origin of the universe. The discovery of genes has given humanity many hints relating to human existence from civilized and cultural point of view.

Science and technology have had an immeasurable influence on the formation of our understanding of the world. Our view of society and our outlook of nature. The impact of science and technology on modern society is broad and wide ranging influencing such areas as politics, diplomacy defence, the economy, medicine, transportation agriculture, social capital improvement and many more. The fruits of science and technology of the 21<sup>st</sup> century science and technology.

#### **Conclusion**

The development of science and technology is directly related to the development of human race. The developing civilization utilized knowledge of science and technology for their growth. We can say that the better conditions of human livings are all based on the scientific inventions.

Science plays a very important role in the society. All the development which has occurred in the society is all due to development of science. Hence the society is depending on the progress of science.

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