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# CAN SCIENCE SAVE US?

## BRAIN STORMING

### Thesis

- ① Improved medicine + health
- ② Technological advancements
- ③ Agricultural productivity
- ④ Energy & Transportation
- ⑤ Understanding the environment
- ⑥ Enhanced quality of life
- ⑦ Education and knowledge
- ⑧ Safety & Security

### Antithesis

- ① Environmental pollution
- ② Nuclear weapons & warfare
- ③ Climate change
- ④ Health risks from technology
- ⑤ Biological & chemical threats
- ⑥ Ethical concerns
- ⑦ Economic disparities
- ⑧ Dependence on technology

## OUTLINE

### 1) Introduction:

1.1) Hook statement

1.2) General statement

1.3) Thesis: Science is benefitting mankind ~~since~~ from centuries in a number of ways such as improving medicine ~~and~~ and health, making technological advancements, agricultural productivity increase, energy production <sup>and</sup> transportation, understanding the environment, enhanced quality of life, better education and knowledge, enhanced

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safety and security. Along with benefits it has impacted our lives negatively also for example by creating environmental pollution, nuclear weapons & warfare, causing climate change, posing health risks from technology, causing chemical and biological threats, causing ethical concerns, causing economic disparities & relying abundantly on technology.

## 2) Benefits of science on our life

- 2.1) Provided better medicine & health
- 2.2) Made technological advancements
- 2.3) Enhanced agricultural productivity
- 2.4) Produced energy and made transportation better
- 2.5) Made us understand the environment
- 2.6) Enhanced quality of life
- 2.7) Enhanced education and knowledge
- 2.8) Better safety and security

## 3) Damages of science on our life

- 3.1) Caused environmental pollution
- 3.2) Nuclear weapons and warfare
- 3.3) Caused climate change
- 3.4) Posed health risks from technology

3.5) Caused biological and chemical hazards

3.6) Ethical concerns

3.7) Economic disparities

3.8) ~~Reliance on tech~~ Abundant reliance on technology

#### 4) Conclusion

4.1) Summary

"You see, when medicine works, it is blessed science, and when it fails, it is witchcraft." This statement was said by Polidori, a British writer and physician. Since the advent of science it is impacting the human life both in positive and negative ways.

The ones who are wise enough use science for their benefits and make their ~~lives~~ <sup>lives</sup> easier while the stupid ones take negative benefits of science and not only make their lives difficult but also wreak havoc in other's lives. Science is benefitting mankind from centuries in a number of ways such as improving medicine and health, making technological advancements, increasing agricultural productivity, producing energy and making transportation better, in understanding the environment, enhanced quality of life, better education and knowledge, enhanced safety and security. Along with benefits it has impacted our lives negatively also for example by creating environmental pollution, nuclear weapons and warfare, causing climate change, posing health risks from technology, causing chemical and biological threats, causing ethical concerns, causing economic disparities and abundant reliance on technology.

First of all if we direct our minds to see the positive side of science, we will see that science has impacted our lives in many beneficial ways. It has provided us with medicines to save our lives. The invention of vaccines was a life turning point in the field of medicine. With the help of vaccines many lethal diseases such as polio, pertussis, diphtheria, measles and typhoid can be prevented. The invention of antibiotics not only made our health better but also provided us relief against diseases. Today with the use of antibiotics we easily fight against bacterial damaging our body. In medical field advancements like X-rays, MRI, C-T scan have made the diagnoses of diseases very easy and at an very early stage. With the help of science we are able to understand the diseases better and provide effective cures for them.

Then with technological advancements our lives has become much more easier and comfortable. Household gadgets such as washing machines, vacuum cleaner, refrigerators <sup>and</sup> air conditioners not only provide us with comfort but they also make our lives easy. We save much of our time which we can invest

in other beneficial activities. The invention of computers, smartphones and internet makes us feel like we have access to the whole world. These things have made communication really easy and fast.

After that the increase in agricultural productivity due to better and effective farming ways have provided a big relief for the increasing population. Farming techniques such as irrigation, crop rotation, crop cover, terracing and drip irrigation have increased the agricultural yields. The problem of pests, insects, fungus has been solved by using pesticides, insecticides and fungicides. Then genetically modified crops are being grown in many areas of the world which have better and increased yield as compared to the traditional crops being grown.

While counting the benefits of science one cannot forget the change that energy production and transportation took in our lives. With the production of energy life was completely changed. It was as if our black lives have turned white. Then the development of renewable energy ~~has~~ has also proven to be very beneficial to the problem of energy crises. With the help of solar, wind, hydropower renewable energy can be produced and

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the need of energy units could be reduced. The invention of cars, airplanes, trains made transportation very easy and fast. Any corner of the world can be explored now and communicating with people is no more a problem now.

After that comes the advantage of understanding the environment. Science has led to better understanding of environment. Insight into climate change has led to better understanding of the climate and help us prevent any unforeseen ~~conf~~ conditions. With biodiversity and conservation efforts we can help protect and save our endangered species of animals, trees, plants and sea life. Science has innovated many techniques and ways to protect them.

Next comes the benefit of enhancing the quality of our life. With the innovations in entertainment like television, video games and virtual reality our life has become interesting. We can now easily spend our leisure time by engaging ourselves in these activities. It ~~is~~ is an amazing way to throw our boredom away. We can call over our friends and family and can have game session or spend the evening by watching movie. Such activities not only help us spend our time but also improves our bond and

connection with our friends and family. The innovation of science has led to better structure of houses which help us in living our lives ~~in~~ with comfort. With the help of thermal insulators insulators installed in our walls and roofs our homes are better protected against intense heat and cold. Weather resistant paints on our walls help our homes against drastic weather conditions such as heavy rainfalls or a fully sunny day. Rechargeable equipments also has made our lives very easier without the worry to buy equipments again and again.

Next in the list comes the advantage of education and knowledge. Science has proved itself in this field also. With the discovery of online education we have now access to study in any college or university of the world without being physically present there. The biggest benefit of it proved during covid-19 when going out our homes became the biggest threat. At that time online platforms such as zoom, google meet and others made online classes possible. During that whole period universities and colleges conducted online classes so that the ~~study should~~ studies could continue and children and students could benefit from the ~~access~~ comfort of their homes. Now we don't have to travel overseas to get international degrees.

Day. because now all of this is possible through online programmes. Today getting diverse knowledge is no more difficult. Getting knowledge from a variety of books is just a click away. We don't have to study heaps of books to get our desired information. With the access of internet and google we can get the desired information within seconds. Various books, magazines, important research papers and what not is available on google.

With the discovery of artificial intelligence applications such as chat GPT and Gemini our researches have become much more specific and to the point. It provides us with the most relevant and precise knowledge which also saves our time and improves our efficiency.

Last but not the least science has improved our safety and security standards. With the development of surveillance systems and disaster prediction models our lives have become protected and secure. For example the installation of security cameras at buildings, shops and our homes have significantly reduced the incidents of robberies and thefts. Advanced level security locks have also made our lives easier because they have advanced protection and cannot be opened by everyone. Then different disaster models help our

people against any kind of emergencies. Today such devices are present which detect disasters before time such as floods, earthquakes, cyclones and tornadoes. It has proved to be really beneficial as we get to know of disasters well before time and can intimate people. Governments have taken many benefits from this as it helps them to notify people so that they can vacate their areas and reach to a safe place within time.

No doubt science has given us many benefits but it also has damaged our lives badly. The negative effects of science has wrecked havoc into our lives.

Firstly it has caused environmental pollution. Various industrial activities such as new experiments and ongoing procedures particularly by the wheat, cloth, sugar, tile and rubber industries have contributed to air, noise, water and soil pollution. The noise from the working of machines contribute to noise pollution. Waste from these industries is dumped directly into nearby rivers and lakes or any open area which contribute to soil and water pollution.

These waste materials contains many harmful substances and chemicals which are dangerous for sea life.

Then overuse of pesticides, fungicides and insecticides is being done which is harmful for the health of

mankind and ecosystems. They contain hazardous  
intoxicants and chemicals to kill microorganisms which if  
inhaled by human beings by mistake can prove fatal.  
Other than that the increasing use of plastic products  
is an ongoing challenge to solve as plastic usage itself  
has many harmful effects.

Secondly nuclear weapons and warfare products  
have also caused large-scale destruction. After the invention  
of nuclear bombs and other such warfare, they were thought  
of as big blessings until they proved that their use is  
no more than a curse. One such example is of Hiroshima  
and Nagasaki. During world war II, United States  
of America used atomic bombs for the first time on  
2 cities of Japan. Two atomic bombs namely 'Little  
Boy' and 'Fat man' were thrown on the cities with  
the gap of three cities. First attack was done on  
Hiroshima and the second on Nagasaki which caused  
life losses of approximately 80,000 and 45,000 respectively.  
This shows the devastating effects of nuclear weapons  
of mankind. Such weapons are only beneficial for  
the sake of difficult times when any country tries to threaten  
the other because their use has devastating effects.

Next comes the climate change caused by the use of scientific inventions. The fossil fuels used in vehicles is the biggest contributor in causing climate change. The usage of fossil fuel led to the escape of dangerous substances into the environment such as carbon monoxides, nitrogen monoxides and sulfur dioxide which cause global warming, ozone depletion and greenhouse effects. These phenomenon are important components of climate change as with the passage of time the use of fossil fuels is leading to the phenomenon which is leading to the increase in the temperature of our environment all over the planet. This increase in temperature is having life devastating effects such as the melting of ice ~~off~~ in the antarctic regions and glaciers causing floods often. Floods leads to wastage of water and thus the availability of water for various uses of our daily life is decreasing day by day. Climate change is also caused by deforestation for our human uses. Deforestation has led to disturbance of various ecosystems which in turn has lead to climate change. Deforestation is ~~used~~ <sup>done</sup> to facilitate housing societies, industries and big projects going on. Following this comes the health risks posed by technology. To list some of them are the use of X-ray

machines, MRI machines. These radiations can get into our body and pose health risk which can have immediate and lifelong effects. Then the use of video games devices such as ~~PS~~ playstations and the use smartphones can cause addiction. After using them for sometime we feel it difficult to go away from them. These gadgets also put strain on our eyes causing weakening of our eyesight. It has been scientifically proven that children who are more fond of watching television for hours are dull by mind and less creative. Toddlers who watch television for long hours start speaking late in their life.

In addition to this comes the chemical the  
~~but~~ biological hazards caused by scientific experiments. Sometimes uncontrolled experiments are done in labs which results in release of various harmful substances which cause harm to all substances coming in contact with them. For example when researches are going on for making new antibiotics to replace the old antibiotics to which bacteria have become resistant, various tries with various chemicals, substances are done which result in many toxic products. Obviously these toxic products are then dumped without taking due care to properly dispose them off and causing harm to

human, animal and sea life organisms.

Moreover, the use of science in various fields has caused moral, ethical and societal dilemmas.

For example the use of machines in each and every field of life is causing tension among human beings.

With the use of machinery our lives have easy and fast but it also has led to job loss and replacement of human with machines. As machines can perform the given task faster than machines they are replacing human beings at an amazing speed which is causing a number of people to lose their jobs thus creating an economic pressure on them. Scientific advancements like artificial intelligence has caused much problem for humanity.

Human like robots are now able to perform all human activities and are preferred more than humans. Then the concept of cloning and genetic engineering are also alarming the human nature by going against the laws of nature.

With the help of cloning human duplicates are possible to make which is now even being done in advanced parts of the world. With the advent of science such techniques are now possible by which it is possible to determine the sex of the zygote according to your own choice. By scientifically mating the sperm with egg

# outside the body, called as In-vitro fertilization, it is possible to determine the gender of the baby according to your own choice. All such things which are being practiced are morally and ethically very wrong and against the teachings of Islam.

Furthermore comes the issue of economic disparity caused by the advancement of science. The well-developed countries who are better equipped with resources and who have more knowledgeable people take more advantage of science and make more advancements in this field, whereas the countries which are in the developing phase they are struggling to make scientific inventions as they have limited resources and less economic support. This thing creates economic difference between the countries. The already developed countries are advancing fast towards more developed conditions because of science and the less developing countries are lagging behind them.

Adding the last point, science has caused human beings to be overly dependant on it and which has led to its negative use also. Whereas science provides us with safety and security it has on the other side led to the breach of human security. With the advancements of knowledge, people are getting expert.

in cyberattacks and cyber security is at stake. Our information and personal data is no more now safe. The incidents of cyberattacks is increasing day by day in the whole world leading to the loss of many private and personal information to hackers which results in people having depression, anxiety and some cases of suicide have also been reported due to this cause. While these disasters often stem from the misuse or unintended use of scientific processes, they highlight the responsibility of ethical responsibility, regulation and sustainable practices in science and technology.

Summarizing it all, science has greatly enhanced human life by improving health, education, knowledge, agricultural output, advancing technology and fostering global communication. It has revolutionized industries, transportation and communities while enabling a deeper understanding of nature and environment. This all is enough on behalf of science to save our life. However, the misuse of science has also put our life in danger by causing environmental pollution, climate change, nuclear weapons and warfare and ethical dilemmas in genetic engineering and artificial intelligence expose the

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darker side of scientific process. While science offers immense potential to solve global challenges, its responsible use is essential to prevent disasters and ensure sustainable development. Therefore, now it depends on us whether we will save or destroy our lives with the use of science.