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Can Science Save Us?

(1) Introduction

Thesis Statement:-

Science has been the savior of the day, by advancing the agricultural practices to offering solution for sustainable energy. In contrast, some argue that science has been a source of many problems lies today. However, this is inaccurate to an extent as technological advancement has change the dynamics of nations.

(2) Science has been a savior in all the fields of life

a- Biotechnology and agricutural practices (precision farming and verticle farming)

b- Advancement in medical science (vaccines- small pox - mRNa covid 19 - CRISPR)

c- Internet has change the dynamics of education (khan academy, VR/AR technology)

d- Disaster preparedness (Indonesia's tsunami warning, India's food predictability)

e- Science has evolved in preserving environment (green project, carbon capture project)

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f- Advancement in Business through Artificial Intelligence and Automation.

g- exploration of space ~~and~~ for future resources.

(3) Science can not Save us.

a- Climate degredation due to massive Industrialization and automobils.

b- Heavy reliance on technology has reduced the Critical thinking of an individual.

c- Cultural and ethical dilema of breach of privacy.

d- Job Insecurity and human exploitation.

(4) Real life cases on how Science has proven to be a game-changer.

a- Singapore's urban sustainability and smart cities.

b- Israel's Desalination and water Scarcity Solution.

c- Kenya's Agricultural Innovation and Mobile banking

(5) Conclusion.

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"When the world faced the covid-19 pandemic, Science rose to the challenges- vaccines developed in record time saved millions of lives, proving that- innovation can be our greatest ally in any crises." This highlights how science have always proven to be a boon - saving humanity for the crises that threaten its existing. Science has emerged as a tool to save humanity - as the world is growing the demand for food, medicines has escalated even more. The advancement in agriculture practices through precision farming, and developing vaccine to safeguard the humanity was the step in the direction. Education's practices has been reshape by the emergence of internet and technology and it has become easily accessible to the people living in remote areas. Technology has the powers in reshaping the order of world, climate change is considered a real life threat - but with the advancement in the climate the green technology and carbon capture projects are crucial in preserving the environment. Nevertheless, some opine that Science has been the destroyer of humanity through economic

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exploitation and creating job insecurity. They also argue that Science has created a dependence on technology that take out essence of critical thinking and brain staing. However, these arguements are not valid as Science has fight against the odds in innovating businesses practices and provide ways to preserve the resources. Science has always been the savior of the day by advancing outdated practices. Some argues that Science is a source of all evils and it can not save us. However, the beauty lies in observing and Science does has transform the world order in new and innovative ways.

Science has alter the ways of doing things by making it more productive and useful. one of them is Introducing Biotechology in agricultural practices that has paved the way for more efficient and sustainable farming practices. The famous agricultural practices include precision farming which utilizes technology such as GPS, sensors and data analytics that revolutionized how crops being used. precision farming allow farmers to know when to apply water, fertilizers and pesticides. Moreover, vertical farming is the solution to

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Comprehend the demand for food in urban areas. Vertical farming crops grew in stacked layers maximize space usage and decrease the need for vast agricultural land. Together these advancement in precision farming, vertical farming are creating more resilient and sustainable food system for the generations to come.

Aside from agricultural innovation, the advancement of science in medicine and health has alter the ways of traditional medicines. The development of mRNA vaccine for covid-19 marked a ground breaking achievement in medicine. Unlike old vaccines, mRNA uses cells to produce protein resembelling the virus, triggering our immune response. This allowed a rapid growth and proved successful. Another remarkable achievement of science in medicine is CRISPR-Cas 9 gene-editing technology, which has revolutionized genetics. By enabling accurate and targeted genetic modification CRISPR holds promise for curing inherited diseases like anemia. Thus, science has provided the solution for long-standing medical challenges.

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Along with medicine Science has transform the ways of education through internet. The internet has revolutionized education making learning accessible to millions world wide. Khan academy is one of the example that has provided high quality education through videos and interactive exercise. Additionally, the virtual reality (VR) and Augmented reality (AR) are transforming classroom experience. The Stanford University has adopted VR/AR technology ~~and~~ for doctors and researchers for more real experience.

Aside from education, Science has expanded its arm in the disaster preparedness to save the humanity from natural calamities. The Indonesia's early warning System has been remarka because it is based on ocean sensors - sesimic waves and real time analysis. This upgraded System helped indonesia in 2018 tsunami in evacuating commities in time by reducing loss. On the other hand India's flood prediction and management by utilizing Satelite data for early warning System to evacuate areas in time to eliminate the life losses. Thus, these early warning System has

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proved to be the game changer in the changing climate.

Along with disaster preparedness, Science has played a crucial role in tackling climate change by developing solutions. Science focused on utilizing green project by shifting towards renewable is the right step to stop natural disaster and adopting sustainable practices. China has been the major exporter of solar panel to encourage renewable. Additionaly, the Norway's project of carbon capture and storage is one of the world's first project, where Co_2 is captured from natural gas production and injected into deep geological formation beneath north sea. Hence, Initiatives like carbon capture storage and renewable are the step in the right direction.

Besides preserving environment, Science has also advances the ways of conducting business through artificial intelligence and automation. Business practices has been enhanced by data analytics and improve marketing, finance, and sale decision to predict market trends, and enhance customer experience. Target

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uses predictive analytics method for personalized shopping experience. Amazon uses AI logistics and recommendation system for data analytics. Hence, Science has modified the business practices by leveraging new innovations and experiments.

Apart from enhancing and innovative experience of businesses — Science has explored the new dynamics of space for future resource allocation. As the global population increases and natural resources becoming more scarce, space exploration offers new frontiers for acquiring essential materials. Asteroids for instance, are believed to contain vast amount of rare minerals and metals such as platinum, gold and water. which could be used for future technological advancement in supporting life on earth. The continues exploration revealed the sustainable ways to develop life through exploration and technology.

Despite the advancement in Science, some argues that Science has

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only aggravated the situation by not saving us but making us more depend. One of the argument lies that science and industrial revolution has destroyed climate. The temperature has rise below 1.5c and it resulted in more frequent disasters and natural calamities. which not only affect the people but entinct of species. According to UNFCC Between 1990-2022, human driven climate change has led to permanent increase in aridity on 77.6% on earth masses and expanding dry lands to 43 million sq meters. Hence, science and advancements threaten the existence of humanity by destroying the world.

Together with climate degradation, heavy dependence on technology has reduced the cognitive abilities of an individual. when people heavily rely on search engines or AI driven recommendation, to get an answer more quickly it stop the brain in more engagement and seek quick answers for everything. This dependence on technology has even reduce the practice of spell check and grammer evaluation. Softwares like grammarly, quillbot has reduce the ability to

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brain storm and get the ideas. Quick and easy to serve techniques has. This Shallow learning has snatched the critical and complex thinking that affect decision making abilities of an individual.

Besides ~~from~~ heavy reliance on technology requires critical thinking, Science has surrounded the people from everywhere from a simple watch to mobile phones. It has created a cultural imperialism. The constant surveillance and accessing of the data on everywhere is nothing but a notion of breach of privacy. The AI algorithms of reading or listening what anyone is thinking and show the relevant products are the example of cultural dilema and breach of privacy. According to Reuters in 2024, around 420 million data records were leaked in data breach. This reflects how science has evolved in privacy breach.

Lastly, Science has resulted in labour exploitation and job insecurity with the advancement of science. people have lost their jobs as the

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new technology demands new skills and abilities to perform the job. This massive technological shift create a sense of alienation like Karl Marx states how this Industrialization will only exploit the proletariat and benefit the elite. Thus, this cycle of exploitation and alienation through job insecurity will continue with the advancement in Science.

However, Science has done more good than harm to the society. Some of the real life cases are discussed to prove that Science has been a savior not a destroyer.

Singapore has used Science and technology to transform itself into a model of urban sustainability. Singapore has heavily invested in green technologies encourage energy efficient and environment friendly designs. Also, the country is pioneering smart transportation solutions to reduce congestion and enhance mobility. Smart traffic management system use real-time data to reflect and reduce traffic issue. Moreover, the country has encouraged in rooftop farming to fulfill the needs of food and making the urban posture more sustainable.

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Israel's desalination system and addressing the issue of water scarcity has been renowned in the world of technology. The country with limited fresh water resources, has used scientific innovation in desalination technology to meet its water needs. Israel is a world leader in desalination, with advance facilities. Israel's reverse osmosis (RO) is a process that pushed sea water through semi-permeable membrane, which removes salt and impurities and make the water pure and fresh.

Lastly, Kenya has advances its technology in two areas, agriculture and mobile banking. The country has developed precision farming, agroforestory, sustainable farming and M-Pesa that connects farmers through different vendors and suppliers for competitive advantage. The agroforstory involves planting trees alongside crops or live stock to create more resilience and provide shades. Moreover, apps like twiga foods and M-Farm streamline agriculture supply chain, reducing inefficiencies and connects vendors and supplier for better price.

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To conclude, Science has evolved the ways of daily life from agricultural practices to the medicine and equeations. Science has explored its aims in every direction possible to serve the humanity. By preserving the environment to introducing different techologies in preparing for disastess to save the commities and reduce the losses. On the other hand critiques argue that Science has been the source of all evils as the climate degevadation to economic exploitation of Labour are all the part of advancemit of science. However, the reality is different as Science and Industrialization increases the chances of opputunities and technology has increased the demand for food genevation. Hence, Science does has the ability to save us - from small pox to covid, and green projects to desalination are all the blessings of Science.