
History And Causes Of Overpopulation

History of overpopulation

In this section of the paper I will be discussing how the population has increased from 500BC to the present day and how the rate of population growth has changed overtime. Furthermore, I will be discussing how changes in the total population and population density lead to detrimental historical events such as diseases, wars, mass migration and other movements. Events such as these show that at certain periods in time, large disruptions may very well have been because of overpopulation.

Initially, the growth of Homo sapiens was influenced by the agricultural revolution. This gave early humans the ability to produce enough food so that they did not have to migrate to their food source. As these humans were very closely connected to their homes, settled societies began to form. This meant that they were enabled to build permanent structures that would soon lead to the formation of villages which allowed the population to more easily increase. In the later centuries this would lead to the development of towns and eventually cities. The graph below shows how the population has changed over the years since 500BC and what figure it is likely to reach by 2025. You can clearly observe that initially the increases in population rise were much smaller to begin with. For example, from the year 1000 to the year 1900 there was a rise in the population from 300 million to 1.6 billion. However from the year 1900 to the year 1999, which is a much smaller difference in time, the population exploded from 1.6 billion to 6 billion. This shows that the growth of the human population is exponential. If this trend continues then we will hit 10 billion by the year 2050. We do know that population growth is slowing as families are beginning to have less children and young members of society are more educated than ever about child birth but it still seems that we are growing at too fast a rate for the planet to cope.

From 500BC the population continued to grow exponentially because families began to have more children, however, as there were many more children to look after, their standard of living decreased. With a decreasing quality of life, damaging events became more likely to occur. One of the most harmful events to effect Homo sapiens was the black plague. This new disease is estimated to have killed 30% to 60% of Europe's population from 1347-1353.(History Today, 2005, The Greatest catastrophe Ever, <https://www.historytoday.com/archive/black-death-greatest-catastrophe-ever>) This also struck Europe at a difficult time as all the conditions were correct for an epidemic. Firstly, medics were powerless against infectious diseases because they lacked the necessary technology to deal with the negative effects. Also people had been weakened by harvest failures and the ongoing turmoil. Due to the increasing population, many people who lived in dirty towns were living with germs, the fleas that carried them, and the rats that carried the fleas. Furthermore, busy trade routes carried the plague from one place to another all over Europe. One may argue that, had there been a larger population in Europe at that time, the speed at which human intelligence developed would be greater. There would also be more doctors working towards cures and everyone would be better equipped to deal with the plague. However, studies show that the reverse is true. It was the rapidly growing size of the population which meant there were too many people per single doctor and that they were not able to tackle the plague. At that point in time Europe was overpopulated as the tools that were

available were not suitable to match the needs and wants of those living, let alone the generations that followed. The plague could be seen as a cleansing due to the mass reduction in population that followed of 30% to 60%. The result was that there was more food available for the poor because of lower competition, there was also less stress on the land because of lower demand for food and places became much less crowded. This goes to show that the planet could not deal with the level of overpopulation at that time but as the plague came to a conclusion there were many positive effects on the planet that increased the environmental sustainability. Air quality improved as well as the quality of the farm land. This means that, as soon as the population had been reduced back to a sustainable level, the planet could cope with the level of demand from the current smaller population at that point in time.

Another time the planet has had to deal with a mass change in the population was during the second world war. Firstly, WW2 was not a direct consequence of overpopulation but it was one of the influencing factors. There were too many people without work as there weren't enough jobs. This was causing an economic depression and soon after banks began to close, businesses closed, prices fell etc. At the same time there was instability in Germany after Hitler began to enact his promise to restore German wealth and power. These factors, along with other economic issues, led to the beginning of WW2. However, had there been a lower population at the time then these issues might have been avoided because less stress would have been placed on each economy. The world went into a depression in the 1920s as the planet had been battered by WW1 and there were too many people demanding resources and nobody could cope. The stress was over-whelming. WW2 reduced the world population by around 3% but it was the effect on the planet that was so large. Many ecosystems had been damaged by endless bombings, water sources had been contaminated by chemicals and battlefields had been left as toxic uninhabitable environments. This was very harmful for the planet and it would take many years to recover. Moreover, it was what followed WW2 that was also so detrimental to the future of the globe. As the war came to a close, many people returned from the war and felt it was a much safer environment to raise a child. This meant that millions of people around the globe began having multiple children, especially the United States which experienced a greatly elevated birth rate, adding on average 4.24 million new babies to the population every year between 1946 and 1964. This period was known as the Baby Boom and it shot population levels right back up. During this period in time there were great fluctuations in the global population levels. This shows how war has been an effect of overpopulation but also how post-war relief can also dramatically change the rate of growth.

Lastly, Covid-19 is a much more recent and relatable example of how overpopulation affects viral dissemination. At the time of writing this essay there have been a total of 2.6 million confirmed cases worldwide and 190,000 deaths. (Worldometers, 2020, Coronavirus Cases, <https://www.worldometers.info/coronavirus/>) The older population has been decimated and the global economy has come to a stop. There are two main factors at play that cause a virus to spread and they are both related to overpopulation. The first is that this is an overcrowded world which is experiencing viruses at a growing frequency. The rate of infectious disease epidemics has quadrupled over the past 50 years. Based on the locations of these viral hotspots, the new dynamics are often attributed to the steady encroachment by humans on wildlife habitat. Experts confirm that the COVID-19 virus evolved in an animal host and then moved over to infect humans. This is also the way several recent epidemics began. Another way that overpopulation has caused Covid-19 is because of the high population density in certain areas. As a virus spreads through airborne droplets that cannot travel far, it means that a virus, such as Covid-19, is particularly dangerous in an environment with high population densities.

Reducing the effective population density in public meeting places is the basic rationale behind the quarantine strategy favoured by most countries responding to the outbreak. But as more and more people live in crowded cities, it becomes harder to control a pathogen that takes just a matter of days to manifest. This is why the virus initially began in a heavily populated area in China and easily spread from there. The effect on the environment was initially harmful as changes in consumer confidence caused products to be dumped in water sources and areas which saw lack of care began to deteriorate (e.g. the state of public areas when not being cleaned and looked after begins to decline). However in the long run the effect on the environment has turned out to be hugely beneficial. As less factories operate, there is less vehicle motion, the sky is beginning to clear from air pollution as are the waters. Furthermore, there is less stress on the environment from farming and modern leisure activities. This shows that the planet was in a state of overpopulation and due to the virus we have cut back on our consumption. This has led to a period of time where the planet can regenerate.

Causes of overpopulation

In this section of the paper I will be discussing and reviewing how various factors can lead to overpopulation as well as looking at a China and India case study. Overpopulation tends to place exceptionally high demands on scarce resources that can lead to widespread environmental issues and detriment the world at a point in time and into the future. To prevent this it is important to properly understand the causes of overpopulation.

Firstly, two countries around the world that contribute to the large size of the planets population are India and China. In fact, 36% of people live in either of those countries. They may both be very large in terms of population but they have adopted different strategies to control their rate of growth. Firstly, China has not only a large population but also a very dense one. This is because most inhabitants are situated in areas around water sources, where the land is fertile land and the climate most suitable. This means that in small areas there are very large demands for resources. This can deplete the natural environment very quickly, especially as their most important resources are finite. Due to this, China began to search for solutions that would help control their rapidly growing population. China has conducted many approaches to family-planning policies but one stands out from all the rest. The One Child Policy was one of the most extreme approaches to population control ever experienced in human history. In 1978, Chinese scientist Jian Song encouraged Chinese government to advocate for a decrease in population growth by 2000. Otherwise, women will have three children and China's population would reach four billion by 2080. "If China did not reduce its fertility to 1.5 or even one child per woman, the resulting depletion of resources would be disastrous". Thus, strict government monitoring was put into action and women were required to undergo monthly gynaecological exams to ensure they were not pregnant (Gynaecology is the branch of physiology and medicine dealing with the functions and diseases specific to women, especially those affecting the reproductive system). Those women who opted for abortion were awarded 14 days of paid vacation, and "40 days if it occurred in the second trimester and was quickly followed by sterilisation". Furthermore, parents with one child received priority in housing, better healthcare and educational opportunities, while families with a second child had to pay back those benefits. "Those who had more than two would have their pay docked by 10 per cent for 14 years". They were also at risk to lose jobs. In the long term, the policy was a disaster. Such a policy distorts the age structure: the proportion of population in the younger age groups goes down and proportion of the elderly increases. This means that more and more people are ageing out of

the workforce and there are fewer people to replace them. Furthermore, it is much more expensive to take care of the elderly than to take care of children. On October 29th 2015, China diluted its One Child Policy, allowing all families to have up to two children. This follows an earlier relaxation in 2013, where China allowed those without siblings to have up to two children. This strategy worked in the way that it successfully reduced the rate of population growth but the economic effects were negative and outweighed the positive results.

India is another country that has a very large population and will soon take over China's however the growing Indian population is much more destructive than that of the Chinese. This is because India is a more densely populated country and has a much more severe climate most of the time which means that India is ill-equipped to support such large populations. There are many factors that lead up to this issue. Firstly, there are many cultural reasons such as marriage being compulsory and usually early. This is because marriage is seen as being sacred and indissoluble in Hinduism and over 966 million people living in India identify as Hindus. This means that having a child is very likely to occur especially at a young age. Furthermore, it is normal there to have more than three children per woman because the infant mortality rate is so high (reaching up to 50% in 2008). Another reason why there population is so high is that there is widespread poverty and illiteracy. Impoverished families have this notion that the more members in the family, more will be able to earn income. Some parents feel that more children are needed to look after them in their old age. The issue of illiteracy also prevents many Indian families from understanding how contraception works. To prevent the Indian population from soaring to high the government has introduced a family planning policy. This should held stabilise the rate of population growth in the near future which would greatly benefit the quality of life in India in the near future.

Poverty is believed to be one of the leading causes of overpopulation. A lack of educational resources, coupled with high death rates and other factors can lead to higher birth rates which results in impoverished areas seeing large booms in population. Areas that have high death rates and especially high infant mortality rates usually have higher birthrates and this is because they will have adopted the idea that they need to raise more children. Bill Gates once said 'the key thing you can do to reduce population growth is actually improve health.' People who know that their children are going to survive have fewer children. When the life expectancy for children stays as low as it does in many countries, women keep reproducing in an attempt to have healthy children. 'Based on current trends, a growing proportion of babies will be born in places where adults have to devote most of their resources to survival, leaving very little to invest in their families, their communities and their countries.'(The Borgen Project, 2003) This effect is so extensive that the UN has predicted that the forty-eight poorest countries in the world are likely to be the biggest contributors to population growth. Their estimates state that the combined population of these countries is 'likely to balloon to 1.7 billion in 2050, from 850 million in 2010.'(Population Institute, 1969)

Contraceptives are now more accessible than ever and studies show that they may be a highly valuable tool against the concern of overpopulation. Although the availability of contraceptives is widespread in developed countries, poor planning on both partners' parts can lead to unexpected pregnancies, statistics have shown that in the UK, 76% of women aged between 16 and 49 used at least one form of contraceptive, leaving a quarter open to unexpected pregnancies. This issue is exacerbated in underdeveloped areas. A study by the World Health Organisation (WHO, 1948) shows that this usage figure drops to 43% in countries that are blighted by issues such as poverty, which leads to higher birth rates. This is an astonishing

figure as more than half the population in less developed areas are in danger of unanticipated births and this can greatly increase the rate of population. On the other hand, in the past 20 years contraception has become much more accessible and the information surrounding the topic is easier to get a hold of and understand. This shows that we are taking steps in the correct direction to solve this problem.