

Sept 3, 1981
Hitheraeum

WAS MALTHUS A TRUE PHOPHET?

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It is estimated that the population of the world in 6000 B C was about five million people. The population did not reach five hundred million until about 1650 A.D., a period of nearly 8000 years. During this time it required an average of a thousand years for each doubling of the population. By 1850 the population had reached one billion, taking only 200 years to double. The next doubling occurred in only eighty years as the world population reached two billion in 1930. The 1981 World Almanac lists an estimated world population of 4, 414, 000,000, doubling in only 50 years.

In 1870 the United States population was recorded at forty million , a gain of eight and one-half million over the previous decade in spite of one of the bloodiest wars in history. When I was in high school in the middle nineteen-twenties, the United States population was one hundred ten million. Now it is listed at two hundred twenty-four million, more than doubling in fifty-five years.

Population growth does not occur uniformly over the face of the earth. Countries are divided into those with fast growth rates and those with relatively slow growth rates. The fast growth rate group, making up about two-thirds of the earth's population, coincides closely with what are known as the "undeveloped countries". Those are not industrialized, tend to have inefficient agriculture, small gross national products, high illiteracy rates, and related problems.

Usually a considerable percentage of their population ranges from undernourished to outright starving. Most Latin American, African and Asian countries fall into this category.

The slower growth rate group, classed as developed countries, consists of the modern industrial nations, such as the United States, Canada, European countries, Israel, Russia, Japan and Australia. Most of the people in these countries are adequately nourished. Doubling rates in the underdeveloped countries range from twenty to thirty-five years. For example, Kenya takes 24 years, Nigeria 28, Turkey 24, Indonesia 31, Philippines 20, Brazil 22, Costa Rica 20, and El Salvador 19. Think what it means for population to double in 25 years. In order to keep living standards at only the present inadequate level, the food available to the people must be doubled. Housing and electric power must be doubled, as does the capacity of the transport system; ^{also} the number of doctors, nurses, teachers, and administrators. This would be a fantastically difficult job in the United States -- a rich nation with a fine agricultural system, large industries and rich natural resources. Think what a problem this is to a poor under developed country, without these resources.

Adding to the problem is the fact that many of the inhabitants of these countries have learned of the life style of the peoples in the developed nations. They have seen magazines, movies, automobiles refrigerators, tractors and even T V sets. They want some of these things for themselves along with more food. This creates an even greater unrest in many of the underdeveloped countries.

Doubling rates for the populations of the developed countries tend to be in the 50 to 200 year range. For example, the United States required 60 years Austria 175, Denmark 88,, Norway 88, United Kingdom 140, Russia 63, Italy 117, and Japan 63 years. Nevertheless, these developed countries have their population problems too. First they are overpopulated by the simple criterion that ~~they are~~ not able to produce enough food to feed their populations. It is true they have money to buy food, but should it become unavailable, severe rationing would be necessary.

Secondly, they share with the underdeveloped countries a serious problem of population distribution. The urban centers are getting more and more crowded relative to the rural areas. The United States is troubled with this problem. We hear of the headaches caused by burgeoning slums, deteriorating school systems, rising crime rates and other related problems.

Only ten countries grow more food than they consume; namely, the United States, Canada, Australia, Argentina, France, New Zealand, Burma, Thailand, Rumania, and South Africa. The United States produces more than half the surplus, with Canada and Australia contributing most of the balance. In 1966 the United States shipped one quarter of its wheat crop -- about nine million tons -- to India. In the process we helped to change the distribution of people in the country. Thousands migrated into port cities in order to be close to the centers of wheat distribution. In the opinion of some, we also hindered India's own agricultural development. Perhaps too many Indians got ~~the~~ idea we had unlimited supplies of grain to ship to them.

This enormous population growth has been a problem only in recent human history. Prior to 7000 B. C. the primitive races of man were hunters and gatherers, and the birth rate and death rate were almost in balance. About this time the gatherers of food learned the art of planting and cultivating. This step, accompanied by settlement in one place with the consequent possibilities of storage of vegetables and grains, led to the establishment of villages, and ultimately to the forming of cities and nations.

The growth of human populations was not continuous after the agricultural revolution. Civilizations grew, flourished, and disintegrated. Periods of good and bad weather occurred, while the apocalyptic horsemen -- pestilence, famine, and war -- took their toll, but did not greatly alter the overall trend of the accelerating rate of increase.

Improved farming practices supplied more and more food to the people which in turn created an ever accelerating rate of growth since around 1650.

Of equal importance in the rise of the population increase is the lowering of the death rate. The progress of medicine in the last one hundred years is truly spectacular. Not only has life expectancy been greatly extended, but control of decimating epidemics has been accomplished. Likewise the control of mosquitoes and other pests has greatly reduced malaria and other diseases. Ceylon is a typical example of the effectiveness of modern medicine and sanitation on the death rate of underdeveloped countries. In ~~1945~~¹⁹⁴⁵ their death rate was 22 per thousand. The introduction of D D T in 1946 brought rapid control over the malaria-carrying mosquitoes. This reduced the death rate on the island to ten per thousand in 1954.

It has continued to decline since then, and in 1969 stood at eight per thousand. Although most of it can be attributed to the control of malaria, part of the drop is due to the killing of insects that carry non-malarial diseases and to other public health measures.

Victory over malaria, yellow fever, smallpox, cholera and other infectious diseases has resulted in similar decreases in death rates in most of the underdeveloped countries. It is unthinkable not to continue to lower the death rate as much as we are able. The only thing that we can do then is to lower the birth rate.

Many of the underdeveloped countries are well aware of their population problems and most of their governments are making an effort to lower the birth rate with varying degrees of success. Some of the developed countries are also making an attempt to control the size of their population. The nation that has so far had the most success is China.

Possibly, only a nation with a strong central government and very determined leaders could make and enforce such stringent birth control measures. Goodness knows they need to lower their population growth rate. The world almanac lists China with a population of 1,012,197,000, and with a growth rate of 1.7, which would mean a doubling in another fifty years. It is amazing how they feed the present number with only fifteen percent of the land arable.

Though China is about the same land area as the United States, a third of it is mountainous and another third is desert. Sixty-three percent of the people are farmers.

India, with a population two-thirds as large as China and with many different tribes, is in an even worse condition. Japan is in many respects, a front-runner in the population-resource crisis. There are a hundred and fifteen million people crowded into an area the size of California. This creates a population density of 800 people per square mile. Every available piece of flat land is under cultivation, with vegetable plots in even the large cities. Nevertheless, food has to be imported in large quantities to feed the people.

Japan is self-sufficient in rice, but imports 14 million tons of other grains, and 3 million tons of legumes. Indeed, Japan completely dominates the Asian food-and-feed-import picture; importing 55 percent of the soy beans, 60 percent of the meat, more than a quarter of the milk, and more than half of the fish meal. Yet, Japan has only about five percent of the total Asian population.

Japanese fishing fleets in 1970 harvested more than nine million metric tons -- over 13 percent of the world fish catch. Japan has spread its fishing operations all around the world to keep the all-important flow of fish moving to its over-populated islands.

But how about South America, especially Brazil with its vast territory? Brazil is in the process of going from an underdeveloped country into an industrialized nation at a headlong pace. Between 1959 and 1969 the annual growth rate of the Brazilian GNP was almost 6 percent, and by 1970 it was close to 10 percent. In 1972 international business men invested at least 3 billion dollars in Brazil, a sum larger than they invested in all the rest of Latin America. The Brazilians themselves invested 9 billion dollars, helping to fuel the economic boom.

At the same time, the government of Brazil ruthlessly tackled problems of corruption, inflation, and dis-organization with marked success. The southern area is developing while the vast northern part is not. Southern farmers with large crops of soy beans prosper along with the workers in industry, while the flagelados in the North migrate in search of work and food. ~~Indians are being exterminated in an ill-fated attempt to develop the Amazon Basin.~~ In short, while one segment of the country seems to be following Japan into overdevelopment, the other part seems doomed to perpetual privation.

Brazil is once again attempting to open the Amazon Basin to agriculture. This huge 2.7 million square mile area -- almost the size of the continental United States -- is covered in large part by tropical forests and their lush undergrowth has long misled laymen into believing that it could be converted into a rich farming area. Unfortunately this is not so. Amazonia, like many other tropical rain forest regions, tends to have thin, poor soils. Most of the nutrients necessary for plant life are contained in the lush vegetation itself. When plants or animals die, the nutrients released by their decay are rapidly absorbed back into the living forest plants through their extensive root networks, which lie just below the surface. Clearing land for farming disrupts this nutrient recycling system. When the land is cleared, torrential rains wash the nutrients away, and soil, alternately leached by downpours and exposed to the tropical sun, undergo a process called "laterization" and turn into brick-like "laterite".

Much of the Amazon Basin consists of such laterite soils and consequently, presents a severe challenge to agriculture. We can only hope that if much acreage is converted to laterite, they will stop before they not only lose the land, but cause an ~~unprecedented~~
unpredictable

effect upon the rainfall pattern.

With great effort, successful agricultural programs could be developed to farm the land, just above the flood plain of the Amazon. This land is inundated at times by the Amazon River and thus fertilized. If they combine agriculture with animal husbandry to make manure available, agriculture might be successful.

Argentina is self-sufficient in food production and does export quite a bit of meat as well as some grain. But it is not likely to increase its food exports materially.

Latin America has about the highest population growth rate in the world. Columbia is doubling its population in 22 years; yet already hunger is wide-spread and many children are dying of malnutrition. The situation in Columbia is typical of small underdeveloped countries in Latin America and throughout the world.

Lastly, we consider the United States. And we can only say, "Thank God I am an American,"-- North American, that is. We have no shortage of food or natural resources. We have one of the most bountiful supplies of water as well as the highest percentage of arable land of any continent. In fact, we have been living in a Golden Age in this country for the past one hundred years, and can do so for another hundred with proper planning and management.

First, we need to determine as accurately as possible the maximum number of people the United States can feed, and maintain a standard of living comparable to the one we now enjoy. We must

present this information to the American people and tell them ~~that~~ *the danger of over-population. There is an ample number of people in the U.S. at the present time.* There is no labor shortage in industry as more and more jobs done by men and women are being taken over by machines. Also, there is no shortage in agriculture because farm machinery has already taken over for man and the mule. Only at harvest time is there a shortage of labor -- such as tobacco cutting here and fruit and vegetable picking in other areas. Particularly the fruit and vegetable picking by migrant labor *has* brought this country a real headache, namely, the great influx of illegal Mexican aliens pouring across our borders.

Add to these, the Haitian refugees and other boat people who regularly wash ashore; there are now more than five million illegal immigrants in this country.

The proposals for meeting the problem while a step in the right direction, fall far short of the needed measures. The main proposal, an amnesty program for the illegal aliens, is almost sure to fail because it offers them too little incentive to reveal themselves. The plan would impose a ten -year waiting period during which an alien interested in United States citizenship would pay taxes, but be ineligible for welfare or unemployment benefits. And during this period, he could not bring in his wife or children.

In ~~the~~ theory, the second proposal, which would admit 50,000 Mexicans for short term employment in each of two experimental years could help both countries. The United States would get an orderly flow of workers for low - paying and hard to fill jobs, and Mexico would get some relief for its unemployment problem.

The third proposal, to fine the employers who knowingly hire illegal aliens, from \$500 to \$1000 per illegal worker should certainly be enacted. However, getting a conviction that the employer knowingly hired the illegal worker is going to be very hard to prove unless a better way of verifying citizenship is adopted.

Beefing up the Border Patrol is badly needed. The proposed adding of seventy-five million dollars to the immigration service budget is much too little, especially as it follows an earlier cut in funds for that agency. Every dollar spent in border control will be repaid many times by money saved later in caring for illegal aliens.

There is no shortage of workers in the general service area that can not be readily filled except in the most highly technical fields. In an ever more technological society, there are more jobs in the service category because so many types are included, from the most skilled to the least -- from doctors to the common laborer, and from teachers to baby sitters.

I do not doubt that we can feed a population twice our present size, but at what cost? We have been living in an age of abundance, enjoying a standard of living that has been the envy of the whole world. But we have also been using up our resources at an unprecedented rate. We had such vast riches to start with that the people considered them inexhaustible. Unfortunately, we are finding that several of our minerals are being depleted; and everybody knows of the oil shortage. Most of the people also know of the pollution

problem -- air, water and sea -- and don't forget the garbage.

There will have to be drastic changes in the living style of most Americans. Will the large cities get ever bigger, or will the people move more to the smaller cities and towns? How in the world can we accomodate twice as many cars? Won't we have to modernize and rebuild our railroad systems and bus facilities?

We are having a hard time building enough housing to care for our present needs. What kinds are we going to produce in the future and where are we going to put them? Hopefully, not on some of our best farm land.

Our agricultural system is highly efficient and very productive, but most of our best farm land is already under cultivation. True, it can be farmed more intensively and increase production by quite a large amount; but this will have to be done very carefully to keep from overworking the land, especially the marginal land.

On August 20 the United States Department of Agriculture published the following report:"An all-out push to export more farm commodities could mean greater erosion of the nation's precious topsoil during the next half century. There will still be adequate productive capacity to meet domestic needs. But meeting projected export demands will require an extensive conservation effort to protect the nation's soil resource base from excessive erosion. Without production and conservation keeping balance, farmers stand to lose irreplaceable amounts of topsoil.

"Each year water causes about 1.9 billion tons of topsoil to erode from our cropland. On 94 million acres (nearly one-fourth of the total) soil loss exceeds levels at which production can be sustained indefinitely. It stated that if soil erosion in the corn belt continues at the 1977 rate of loss until the year 2030, corn and soybean yields there would be cut 15 to 30 percent.

This report does not include recommendations on how to solve the erosion problem. However, another report due later this year is to have specific recommendations to control this problem.

In addition to erosion, the conversion of crop land to shopping centers, new highways, parks, dwellings, and other non-agricultural uses, if continued at the present rate, will reduce farm acreage by 875,000 acres per year.

Each country needs to make an accurate study of its population growth, the number of people it can realistically expect to feed and clothe, and present these facts to its people. Only when they realize the extent of their plight will they co-operate fully with their government. Birth control measures are a must.

Our government should lay down guidelines for us to follow. It should not only quit subsidizing large families, it should set a goal of two children per family. It will, however, do little good to hold our birth rate down if we continue to let illegal aliens pour into the United States. We must take whatever steps necessary to give us control over immigration both legal and illegal. We are no longer a thinly populated country as we were in the last century when France

gave us that beautiful statue in recognition of our accepting the deprived masses of Europe. America thrilled to the Statue of Liberty and to those oft quoted lines of the beautiful poem by Emma Lazarus engraved on it. "Give me your tired, your poor,

"The wretched refuse of your teeming shore,

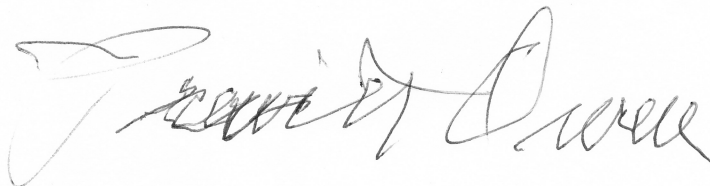
Send these, the homeless, tempest-tossed to me,

I lift ~~up~~ my lamp beside the golden door."

Unfortunately, we do not have room for the "wretched refuse" of the world. If we accept them, we will soon be as overpopulated as India and China.

I do not know how many we can continue to feed without damage to our cropland. I am sure we will do what we can to ease world hunger. But at the present birth rate it will be only a relatively short period of time before the world will undergo mass starvation. It could be immediate if a ~~severe~~ natural disaster, such as a very severe drought, should occur.

We can only hope that the peoples of the world will very soon grasp the severity of this complex problem and will exert the necessary discipline to solve it.

A handwritten signature in cursive script, reading "Francis D. Owen". The signature is written in dark ink and is positioned at the bottom right of the page.