

AN **HUMANS:
ENDANGERED
SPECIES**



THE ONLY SOLUTION

Jason G. Brent

Municipal Court Judge, Attorney, Certified Public Accountant, Engineer, Film and TV Producer

HUMANS: AN ENDANGERED SPECIES

By Jason G. Brent

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ABOUT THE AUTHOR



About the Author

Jason G. Brent holds degrees in Engineering (B.S. in Industrial Engineering) from Lehigh University, Business (M.S. in Business) from Columbia University Graduate School of Business with a major in Accounting, and Law (JD) from Columbia University Law School.

Mr. Brent served as a Municipal Judge in California. Prior to retiring, he was licensed as a Lawyer and Certified Public Accountant in the states of New York and California. In addition to being a Lawyer, Engineer, C.P.A., and Judge, he also was a producer of motion pictures and television shows.

He has studied the relationship between the ever-growing human population, the earth and its finite resources, and the future of humanity for over 50 years.

An expert in the mathematics of compound growth and its relationship to population growth, he has made himself an expert in the resources used by humanity to maintain the current and future population levels, and how those resources are used to maintain civilization. Mr. Brent has extensively studied the writings of others concerned with the problem of exhaustion of resources, recycling of resources, the availability of obtaining new resources, and items of a similar nature.

Jason Brent presents his chilling findings and a solution for survival, in *Humans: An Endangered Species*

DEDICATION

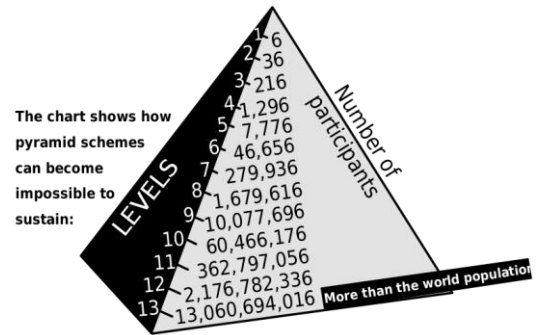
This book is dedicated to my wife of 55 years, Linda, and to my friend, Tim Murray, a genius and most moral man, one of the very few people who understands the problems facing humanity and is not afraid to speak intelligently about them.

ABOUT THE BOOK

A pyramid scheme is a non-sustainable business model that involves promising participants payment or services, primarily for enrolling other people into the scheme, rather than supplying any real investment or sale of products or services to the public.

The flaw is that there is no end benefit. The money simply travels up the chain. Only the originator (sometimes called the "pharaoh") and a very few at the top levels of the pyramid make significant amounts of money. The amounts dwindle steeply down the pyramid slopes.

Individuals at the bottom of the pyramid (those who subscribed to the plan, but were not able to recruit any followers themselves) end up with a deficit.



The human race, as we know it, has become the greatest pyramid scheme ever devised because the unchecked growth of the population and the unrestricted exploitation of the world's resources are moving the human race further and further down the pyramid of sustainability.

Humans: An Endangered Species is a practical look at what we've done and what we must seriously consider if the human race is to continue to grow and more importantly, to survive.

Written as a logical look at the history of mankind's unending desire for population propagation and its self-justifying need to indulge itself with the concept of 'more is better', *Humans: An Endangered Species* takes a statistical approach to understanding who we are, what we've done, and what we're dooming ourselves to unless we take drastic and immediate steps to curtail our unrestrained growth and exploitation of our planet's resources.

INTRODUCTION & SUMMARY

This book was written to give you and all of humanity three choices;

1. **Prove the author wrong.** Show that the author's facts, math, and logic are wrong; or that the conclusions reached by the author are not supported by the math, facts, and logic. Show that the facts, math, and logic set forth by the author can support another course of action that will prevent the destruction of humanity. Show that the course of action proposed by the author will not prevent the destruction of humanity.
2. **Implement the proposals made by the author.** If you cannot show that the author is wrong, then implement the proposals made by the author in order to prevent the horrific deaths of billions of living, breathing human beings and the destruction of civilization, as we know it.
3. **Suffer the consequences.** If you are unwilling to implement the solutions proposed by the author, and you are unable propose another solution which will prevent the horrible deaths of billions, then all of humanity will suffer those horrible deaths and the total destruction of civilization as we know it.

Every major problem facing humanity, without a single exception, will not and cannot be solved or even ameliorated without reducing the population growth of humans to zero; or, more likely, until the number of humans presently inhabiting the Earth is substantially reduced from the current (2011) 7.0 billion. Every major problem currently facing humanity will be solved or greatly ameliorated when the human growth rate is reduced to zero, or made negative. Those who believe that the collapse of civilization and/or the collapse of the social order will not commence for years into the future are just plain wrong. The collapse of civilization and the collapse of the social order have already commenced. The current turmoil (early 2011) in the Middle East is only minimally about democracy versus dictatorship. It is about the fact that no government can satisfy the needs of its citizens when the population is continually growing and the per capita usage of resources is continually increasing. And those statements apply as well to the United States of America. The only reason the collapse of the social order may not have commenced in the United States is because the United States is raping the rest of the planet by stealing the resources it requires to satisfy the needs and demands of its citizens. Of course, a strong argument can be

made that the collapse of the social order has already started in the United States, but that is the subject of another book.

Not only will religious dogmatists, zealots, and anti-abortionists be horrified by what is written in this book, it is highly likely that those in favor of reducing population growth to zero will also be horrified because they will believe what is contained herein is too radical and will bring the entire population control movement into disrepute. I can only challenge them to cast aside their emotional reactions and respond with a reasoned refutation. I would ask----- Precisely what misstatement of fact or fallacy of logic can you locate in the arguments set forth herein? Does any conclusion or statement contained herein not logically follow from the facts contained herein? If anyone opposed to the conclusions reached in this book, or any reviewer or any other reader, cannot point to a factual error or failure of logic, then the conclusions reached herein are not radical, but merely disagreeable to convention and the current view of morality and justice.

THE BOOK BEGINS

The planet earth, the planet the human species inhabits, is finite in size and in the resources it can provide to humanity. The earth is one of eight or nine planets circling a non-descript star in one of the spiral arms, far from the center, of a non-descript galaxy. Our galaxy, the Milky Way, is one of perhaps, one hundred billion or more galaxies that make up our universe and our star is one of perhaps 100 billion or more stars in our galaxy. The earth is a sphere about 8,000 miles in diameter or about 25,000 miles in circumference made up of two major surface parts, land and water. As far as the universe is concerned, our planet is less than an insignificant nothing and we human beings are also less than insignificant nothings.

No debate, discussion, or sophistry can change the fact that, by definition, infinite population and/or infinite economic growth cannot and will not happen on a finite earth. Therefore, at some point both population growth and economic growth will cease. No power on earth or in the heavens will permit infinite economic and/or infinite population growth on the finite earth. Any attempt by humanity to maintain continuous economic and/or population growth is doomed to failure. Any law enacted or any action taken by any government in the world intended to maintain continuous economic and/or population growth is not only doomed to failure, but will lead to the speedy and inevitable destruction of the entire human species in a very short period of time.

There are two and only two options--- 1) continuous growth, which is impossible or 2) a cessation of growth. As cessation of growth is the only possible option, the only questions then are: when will growth cease and how will growth cease?

SMART GROWTH, DUMB OPTION

Growth, of course, may be steered, deflected or managed, but it cannot be rendered benign by being designated as “smart”. Growth is still growth.

As Professor Albert Bartlett of the University of Colorado explained, “The terms ‘growth management’ and ‘smart growth’ [or similar words] are used interchangeably to describe urban developments that are functionally and esthetically efficient and pleasing. Sometimes these planning processes are advocated by those who believe that we can’t stop population growth and, therefore, we must accommodate it as best we

can. Other times they are advocated by those who are actively advocating population growth. The claim is made that growth management and smart growth will save the environment. They don't save the environment. Whether growth is smart or dumb, growth destroys the environment. Growth management is a favorite term used by planners and politicians. With planning, smart growth will destroy the environment, but it will do it in a sensitive way. It is like buying a ticket on the Titanic. You can be smart and go first class or you can be dumb and go steerage. In both cases the result is the same. But given the choice, most people would go first class."

The words "sustainable growth", "sustainable development", "smart growth", "smart development", "responsible growth", or similar words are oxymoronic. More than being oxymoronic, they are misleading and extremely dangerous. Since the earth is finite, growth and development cannot and will not continue. Any attempt to have continual growth or continual development will lead to the destruction of humanity.

Resources are required for economic growth. The world's economy cannot grow without the use of something physical. Human beings tend to confuse economic growth with mental or psychic growth or benefit. Viewing a great work of art or listening to a great symphony is a psychic benefit; it is not economic growth. When the artist or composer receives payment for his work and uses the money to build a house or buy a car or spend it in any other way, that is economic growth. The house or car is a physical object. To have economic growth you need a physical object, and since physical objects are limited on the finite earth, economic growth must cease today or in the future. In fact, a very strong argument can be made that both population and economic growth should have ceased in the past, if humanity is to survive for any length of time.

RECYCLING HAS ITS LIMITS

The intelligence and creativity of humankind cannot increase the amount of resources on this planet. The intelligence and creativity of humanity cannot increase the number of atoms which makeup our planet. The genius of humanity can reduce the amount of resources used for a unit of economic production, permit the substitution of one resource for another resource, and/or permit some resources to be recycled. However, those facts will only delay the exhaustion of resources. Those facts will not change the ultimate truth that both population and economic growth must cease. No matter what humanity does, a unit of economic production will require the use of something physical, a resource.

No physical process can be 100% efficient. Therefore, while recycling will permit the reuse of resources, it will not solve the problem of exhaustion

of resources. Example, assume a car lasts 50 years and assume further that at the end of the 50 years the car is recycled. However, since no physical process created by humanity can be 100% efficient, assume that only 95% of the car can be recycled. Over a period of 2,000 years the car would be recycled 40 times. At the end of 2,000 years, less than 15% of the original material of the car would exist in a manner that could be used by humankind. (.95 x .95 x.95 for forty times is about .13, or less than 15%.) The other 85% of the material still exists, but not in a manner that can be used by humanity. In so far as humanity is concerned, the other 85% is lost and gone forever and can never again be used by humankind.

While the numbers may vary for how long a physical object will last and what percent can be recycled, the concept remains. In simple terms that means no matter what action humanity takes, humanity will run out of material resources to run its industrialized society. Yes, other materials can be substituted, but eventually all materials will be used up—gone forever. In realistic terms that means that population growth not only has to be reduced to zero, but population itself will have to be reduced from the current (as of the date the author commenced writing this book) 6.7 billion humans to some vastly lower number so that humankind can exist on the earth as long as possible.

SPACE TRAVEL, NOT THE ANSWER

While science has found a few hundred planets outside our solar system, none of them will be able to supply resources for humanity to use on the earth and none of them will be able to support our excess population, even if humanity were able to send human beings to other planets.

Our galaxy is in excess of 100,000 light years across and our earth exists in one of the spiral arms very far from the center—we are out in the boon docks, far from other planets that could supply our needs. If a planet were found that could provide resources for our planet it would be, at the very least, 75 light years away. In the terms of distance, a planet 75 light years away would not only be close, our next-door neighbor, but very, very, very close. In actuality, it is highly unlikely that any planets that close will be found which could provide resources for our species. At present our spaceships travel at about 18,600 miles per hour. To raise the speed of our spaceships to just 10% of the speed of light (light travels at about 186,000 miles per second in a vacuum) would require that the speed of our spaceships be increased by a factor of 3,600. (There are 3,600 seconds in an hour.) Such an increase would raise the speed of our spaceships to 18,600 miles per second, or 10% of the speed of light. That increase will not be achieved in the foreseeable future and probably never be achieved. Even if that increase were achieved, it would take 750

years to reach a planet 75 light years away, and 750 years for the spaceship to return. The 1,500 year round trip does not include many other factors too numerous to list here. In reality the total round trip would probably exceed 1,750 years. Remember, that minimum time estimate is based on the assumption that humanity will increase the speed of our spaceships by a factor of 3,600. Therefore, it can be seen that extraterrestrial planets will not solve our earth-bound problems—we will not be able to obtain resources from any extraterrestrial planet nor will we be able to export population to such a planet in time to prevent the destruction of our species.

(Information for those of you who are scientifically inclined-- since our spaceship will travel only at 10% speed of light, the time dilation effect predicted by Einstein will not materially change the time of travel.)

According to a report put out by the Earth Policy Institute in April 2005, humanity is exceeding the earth's regenerative capacity by more than 21%; the world's ecological assets are quickly being exhausted. Humanity is drawing down the capital of the earth and if this continues, even for a short period of time, the destruction of our species is at hand.

According to a report put out by the same organization in 2006, the world's economy grew by 5.1% in 2004, 4.9% in 2005, and is expected to grow by about 5% in each 2006 and 2007. Economic growth is great, up to a point. Economic growth provides a higher standard of living for humanity, which benefits humanity. However, such growth can and will lead to the destruction of humankind. If we use 5% growth per year as an example, and if that growth were to continue, the economy of the world would double in less than 15 years, quadruple in less than 30 years, increase by a factor of eight in less than 45 years and increase by a factor of 16 in less than 60 years. If The Earth Policy Institute is correct and if the economic growth rate were to continue for 60 years at a compound rate of 5% per year, by 2068 (60 years from when the author commenced writing, 2008) the world's economy would be 16 times as large as it is today.

To the best of my knowledge there isn't any expert in the area of economics, or in the area of the resources of the earth, or in any other area, who believes that the earth's resources can support an economy 16 times as large as the present economy. While you may argue an economy 16 times as large today's economy would not necessarily use 16 times the amount of the earth's resources each year, there cannot be any debate that it would use a substantial multiple amount of the resources used by today's economy.

A fact that cannot be disputed—there is a direct correlation between the size of the economy and the usage of the earth’s resources—the larger the economy of the world, the more of the earth’s resources are used each year. An examination of the problems facing humankind today must lead a person of intelligence to the conclusion that increasing the usage of resources by a multiple will lead to the rapid destruction of the human species. If the Earth Policy Institute is correct that humanity is presently exceeding the regenerative capacity of the earth by a factor of 21%, then any increase in the usage of non-renewable resources must lead to the destruction of humanity in the very near future.

While no one can predict the future with guaranteed accuracy, the best estimate/prediction/projection (use whatever word you want) of the US Census Bureau is that the population of the earth will exceed 9.441 billion in 2050 (even with AIDS and with the fact that a number of industrialized nations have achieved zero or negative population growth), and will be growing at the compound/geometric/exponential rate of .51% (0.00507)(see Exhibit 1), or slightly over one-half of one percent per year. Both population and the economy grow at compound/geometric/exponential rates.

(The United States Census Bureau changes its estimates of the future population of the planet and the future population of the United States on a periodic basis. I used the predictions of the United States Census Bureau at the time I started writing this book, 2008. Subsequent to that time, the Census Bureau issued one or more changes to its predictions for the population of the planet and the United States. While these new predictions may be slightly different from the one I used, that does not in any way affect or change what is contained in this book and its conclusions.)

THE POWER OF COMPOUND GROWTH

A small example of the power of compound growth---assume your distant relative put just one cent, repeat just one cent, into a savings account the day Jesus was born about two thousand years ago and assume further that the bank paid 4% interest compounded annually. How much would that very small investment be worth in 1950? It would be worth \$1,600,000,000,000,000,000,000,000,000,000.00. You would not only be very rich, you would be so rich that you would own every piece of land on the planet, own every car, plane, and ship on the planet, you would own every house on the planet, and in short you would own everything on the planet—everyone on the planet would either work for you or be your slave. Compound or geometric or exponential growth is the most powerful force in the universe—it overwhelms everything.

Set forth below is a table that will permit you to determine the length of time in years it takes anything to grow by various factors.

Growth Factor	One half of One %	One %	Two %	Three %
Two times as large	140 years	70 years	35 years	24 years
Four times as large	280 years	140 years	70 years	48 years
Eight times as large	420 years	210 years	105 years	72 years
Sixteen times as large	560 years	280 years	140 years	96 years
Thirty-two times as large	700 years	350 years	175 years	120 years
One thousand times as large	1400 years	700 years	350 years	240 years
One million times as large	2800 years	1400 years	700 years	480 years
One billion times as large	4200 years	2100 years	1050 years	720 years

If you want to know how long it will take for something to grow by a factor of 1,000, just look at the "One thousand times as large" line and you will see that at a compound growth rate of one half of one percent it will take 1,400 years, at one percent 700 years, at two percent 350 years, and at three percent it will take only 240 years. If you used logarithm tables to be 100% accurate the times shown by those tables would vary very slightly from the times above, but not enough to affect anything being contained herein.

The purpose of the table above is to show you how quickly something grows when it grows at a compound/geometric/exponential rate. From that table you can see that if the economy of the United States were to grow at the compound rate of 3% per year it would take just 72 years for the economy grow by a factor of eight – in other words, 72 years from the start of growth, the economy would be eight times as large as when it started. You can also see that if the population of the world grew by just one percent per year, in 280 years it would be 16 times as large as a when it started. If the growth of the human population started in the year 2011 when population reached 7 billion, and if that growth continued at the compound growth rate of one percent per year, in just 280 years the population would reach 112 billion (16 x 7 = 112). To put 280 years in perspective, the Declaration of Independence was written in 1776, 235 years ago.

Professor Isaac Asimov did a math calculation that every intelligent human being should be aware of and consider. If population grew at the compound rate of 2% per year, the weight of humanity would exceed the weight of the earth in a little over 1,800 years and would exceed the weight of the entire universe, repeat the entire universe, in a little over 5,500 years. How long would it take for the weight of humanity to exceed

the weight of the earth if population continued to grow at the rate of two-tenths of one per cent (0.0020) per year, a 90% decrease from the 2% used by Professor Asimov in his calculation? The answer—in less than 19,000 years, the weight of humanity would exceed the weight of the earth. And 19,000 years is a very short period of time when compared to how long the dinosaurs ruled the earth. No matter what action is taken by humanity both population and economic growth will cease and cease in the very near future.

The estimate of the United Nations organization concerned with future population growth is in general agreement with the projection of the US Census Bureau for the year 2050---the medium projection by the UN for the year 2050 is in excess of 9.2 billion. (See below¹ for a discussion of why the numbers issued by the UN could very well be wrong, erring on the low side.) Even if the US Census Bureau were incorrect and population were to grow at 0.0010 (one-tenth of one percent) per year subsequent to 2050, a decrease of more than 80% from the Census Bureau's growth estimate of 0.51%, and that growth were to continue, population would double in about every 700 years. That would mean that the population in 2750 would reach 18.4 billion ($2 \times 9.2 = 18.4$), in 3450 36.8 billion, and in 4150 73.6 billion. In about the same time as from the birth of Jesus to the present, slightly over 2,000 years, population would reach 73.6 billion starting with the UN's medium estimate of population in 2050. If the estimate of the US Census Bureau of 9.441 billion were used, the numbers would be 18.88 billion, 37.76 billion and 75.52 billion respectfully.

No matter the action taken by the human species, the population of the earth will never reach 73.6 or 75.52 billion human beings; our species would exhaust the earth's resources before either level of population was reached.

Being more realistic, see below for a quotation from Lester R. Brown, of the Earth Policy Institute, in which he sets forth his belief that the human population will never reach the 9.2 billion estimated by the UN for the year 2050.

When the UN issues its estimates of the future population of humanity, it does so in eight variations. The three most important of those eight are the low, medium, and high variations, and of those three the most important one, and the most quoted one, is the medium projection of population. Above I used the medium projection of population made by

¹ In 2011, subsequent to the first draft of this book, the UN issued revised population estimates-- 9.3 billion in 2050 and over 10 billion in 2100 and still growing.

the UN for the year 2050, 9.2 billion of our species. However, to put it very mildly, that number is suspect and most surely errs on the low side. A quote from "World Population Prospects: The 2008 Revision Population Database" issued by the UN relating to its medium fertility projection is as follows: "Total fertility in all countries is *assumed* [emphasis added] to converge eventually toward a level of 1.85 children per woman." According to the dictionary I consulted the word "assumed" is defined as "pretended; fictitious; taken for granted". To the best of my knowledge, the UN never issued any written documents supporting the **assumption** that total fertility will converge toward a level of 1.85 children per woman. In essence the 2008 projection made by the UN has been pulled out of thin air and has not and cannot be supported by the UN.

DECLINING GROWTH RATES MASK A COMING YOUTHQUAKE

Exhibit 2 sets forth the estimated age distribution of all of humanity in 2050, as projected by the US Census Bureau. That estimate indicates that 34.4% of the population of humanity in 2050 will be under the age of 25. What does that mean for the future of our species? That distribution means that a very substantial portion of those alive in 2050 will not have started their reproductive years or will be at the very beginning of their reproductive years. That means, if the estimate that 34.4% of the population will be under 25 years of age is reasonably correct, population will continue to grow after 2050 and that the very conservative estimate I used in the example set forth above will be wrong---population will grow at a much greater rate in 2050, and the years thereafter, than the one-tenth of one per cent (0.0010) I used in an above example.

If you will review Exhibit 1, you will notice that the annual population growth rate of humanity exceeded 2.0% during the period 1962-1971. In fact, the annual population growth rate reached a high of 2.22% in 1962 and 1963. The growth rate I used previously of one-tenth of one per cent (0.0010) is less than one-twentieth of the highest growth rate during that period. Even at the extremely low growth rate I used previously, it is clear that the destruction of humanity will happen in the very near future, if growth continues.

While no one can accurately predict when population growth will cease, it is extremely doubtful that this planet could support 19 billion people for any reasonable length of time at the present average standard of living (at the present average per capita usage of resources). A population of 19 billion would almost certainly cause resource wars resulting in the use of weapons of mass destruction, no matter how efficiently humankind uses the resources provided by the earth. Therefore, it is my belief that population growth must stop in the very near future or

humanity will destroy itself. No, that is not correct! Based upon the problems facing humanity today (which will be discussed below), and based upon the explosive economic growth (and it is explosive) of China, India, and many other nations, humanity must convert population growth to a negative number today so that total world-wide population starts to drop as quickly as possible. For the reasons set forth herein humankind does not have a choice—immediately start the reduction of world-wide population, or face almost total destruction with weapons of mass destruction, or suffer the deaths of billions by other horrors.

Any consideration or discussion about the future of humanity must be based upon three simple components--1) the level of human population; 2) the standard of living or the average per capita usage of resources; and 3) the length of time humanity can exist. No matter what humanity does, if population were to reach 100 billion the survival time of our species would be very small. No matter what humanity does, if the average per capita usage of resources continues to increase, the length of time our species will exist will continue to decrease, unless population decreases to offset the increase in the average per capita usage of resources.

In simple terms, an increase in the average standard of living must be paid for by a decrease in population or by a decrease in the length of time humanity can survive on the planet. It cannot be otherwise unless you assume that infinite growth can occur on the finite earth.

THE EXPLODING GROWTH OF THE INDIAN SUB-CONTINENT

In 1942, during World War II, when Japan was about to attack India, India had an estimated population of 390 million. At that time India included what became Pakistan and Bangladesh. According to the best estimate of the US Census Bureau-Exhibit 4, those countries will have a combined population of over 2.2 billion in 2050—India 1.657 billion, Pakistan 291 million, and Bangladesh 250 million for a total of 2.198 billion. If the estimate of population in 1942 is reasonably accurate, and if the estimates of the US Census Bureau for the year 2050 prove to be accurate, those numbers represent an increase in population of about 1.8 billion people for just one country in about 108 years. The combined population of those three countries will be about 5.6 times as large in 2050 as it was in 1942 ($2.198 \div 390 = 5.64$). There isn't any rational basis to believe, and there aren't any facts to support the position, that the growth of population on the Indian subcontinent will be reduced to zero after 2050. In fact, it is more than likely that the rate of growth will increase subsequent to 2050 due to the higher proportion of young people who would not have reached or just reached the age of reproduction. For the sake of argument, let us assume that the population growth of the Indian Subcontinent is cut in half—instead of

growing by a multiple of 5.6 as it is projected to do in the period from 1942 to 2050, we will assume that in the century from 2050 to 2150 the growth rate is reduced to 2.8, a reduction of 50%. Based on that assumption, the population of the Indian Subcontinent would reach 6.154 billion people ($2.8 \times 2.198 = 6.154$), an increase of 3.956 billion people ($6.154 - 2.198 = 3.956$) by the year 2150.

Based on that explosive growth for the Indian Subcontinent (going from about 390 million in 1942 to about 2.198 billion in 2050), anyone who believes that humanity will voluntarily reduce population growth to zero, or make it negative, so that humanity can survive on this planet for any length of time has an almost impossible position to defend. In fact, the position of anyone who believes that humanity will voluntarily reduce population growth to zero, or make it negative, has taken a position that cannot be defended at all and is guaranteed to cause the destruction of humanity. (See below for a detailed analysis as to why voluntary population control will not work and see below for an analysis of the methods by which population growth can be controlled.)

Exhibit 4 contains the estimates of the US Census Bureau for the population of India in 2009--1.157 billion and for 2050--1.657 billion. In just 41 years, according to the estimates of the US Census Bureau, the population of India will increase by over 500 million. The population increases during the same period for Pakistan and Bangladesh are almost 109 million and 96 million, respectively. Grand total for the three countries about 705 million. And the estimates are mostly likely wrong on the low side.

GAMBLING OUR FUTURE ON STATISTICAL PROJECTIONS

The US Census Bureau's estimate of future population growth (Exhibit 1) predicts that world-wide population will grow at the rate of 1.15 percent (0.0115) in 2008, with a generally decreasing rate of growth until 2049 when it will reach 0.51 percent. In absolute terms, the US Census Bureau predicts that world-wide population will grow by in excess of 77 million in 2008, with a generally reducing trend to in excess of 47 million in 2049. Humanity is gambling its future on the estimates of the Census Bureau being generally correct—on a continual reduction in the rate of growth and a continual reduction in absolute numbers. Is that a gamble that humanity should make?

To put the question slightly differently, what would happen to all of humanity if the numbers went in the opposite direction---if instead of a decreasing rate of growth, the rate of growth increased, and if, in absolute numbers, the increase in population went from in excess of 77

million per year to in excess of 85 million per year, and remained at that number until 2050? If, in absolute numbers, population were to increase from 2008 to 2050 at the rate of 85 million people per year, there would be in excess of 10.2 billion people alive in 2050. If population growth were to continue to increase at the same percentage rate for the period from 2008 to 2050 as existed in 2008 (1.15%), population would exceed 12 billion human beings in 2050.

Should all of humanity gamble its very existence on a decreasing growth rate and a decrease in the absolute number of people added to the population each year? If the estimates are wrong and population increased instead of decreasing, a large portion of humanity will probably die in resource wars between now and 2050. Population growth is not the whole story. See below for a discussion of the combined effect on the future of humanity of an increase in population with an increase in the per capita usage of the Earth's resources, and combined with a longer life span.

At this point I will attempt to put the problem of exploding population into perspective. It took from the time our species evolved from the ape, say one or two million years ago, until 1950 for population to reach 2.5 billion. It will take just 100 years, from 1950 to 2050, for population to reach an estimated 9.441 billion, Exhibit 1. If those numbers are correct, population will increase by a factor of 3.78 ($9.441 \div 2.5 = 3.78$) in just one century. That level of human growth never occurred in the past. That level of growth is completely unprecedented. If that level of growth were to continue for just one century subsequent to 2050, population would reach over 35.7 billion by 2150 ($9.441 \times 3.78 = 35.69$).

Anyone who believes the earth could support in excess of 35 billion human beings by 2150 is just plain wrong. Before that level of population was reached, there would be war, and war, and more war, resulting in the deaths of billions—and the deaths would be of living breathing human beings, not embryos or fetuses. Since no nation in the past ever reduced population growth to zero without the use of abortion (according to the Rockefeller Commission, created by President Nixon), we must assume that in the future abortion will be absolutely necessary to reduce population growth to zero (see below for information about the number of abortions which are estimated to occur each year in the USA and in the rest of the world). Humanity has a simple choice--kill embryos, or permit population to continue to increase thereby killing living breathing people after the carrying capacity of the earth is reached.

There are no other choices. If population continues to grow, humanity must exceed the carrying capacity of the earth--in all probability, we already have exceeded the carrying capacity.

Those who oppose abortion must take responsibility for the horrific deaths of billions in the near future. Let there be no mistake--once the carrying capacity has been exceeded there must be war and/or other horrors resulting in massive death and the collapse of civilization and the social order. The carrying capacity is finite and not infinite. If the carrying capacity is one billion and there are seven billion alive, six billion will die or not reproduce, and no power on the earth or in the heavens will prevent that reduction. I will admit the carrying capacity can change--it can increase or decrease--but it cannot become infinitely large. And almost certainly it will decrease as humanity uses up the non-renewable resources the earth provides. In fact, those resources that are considered renewable are in reality not renewable because humanity is using them faster than nature (or nature combined with humanity) can replace them---examples: fossil aquifers and soil in general.

Population control can occur only at two points in time---1) before birth by artificial birth control or abortion or 2) after birth by war (with or without weapons of mass destruction), disease, predation, ethnic cleansing, concentration camps, or other horrors.

Humanity must make a choice, if it desires to survive, when population control will occur. If humanity does not make a choice, by default population control will occur after birth by the horrors set forth above. If humanity desires to survive avoiding such horrors, it must make artificial birth control and abortion available to all of humanity, at a cost that all of humanity can afford. Humanity cannot prevent the deaths of billions. Nothing humanity can do will prevent those deaths. The only choice humanity has is when those deaths will occur. They will occur before birth by the use of artificial birth control and abortion, or they will occur after birth by the horrors set forth above, when humanity has reached or exceeded the carrying capacity of the Earth and a struggle for the remaining resources of the Earth occurs.

The best estimate is that at least 40% of all pregnancies in both the USA and the rest of the world are unplanned. Abortion is needed because even the best methods of birth control sometimes fail, or are not used properly, or are not used at all.

COLUMBUS, THE NEW WORLD AND THE FUTURE OF HUMANITY

At the time Columbus sailed in 1492, neither he nor anyone else in Europe even considered the possibility that the continents of North and South America existed. How would humanity function in the 21st century, if his belief were correct? Could the planet support the current 6.7 billion human beings (the estimated population at the time the

author started writing in 2008 -- the most current estimate is that population has reached 7.0 billion in 2011) without the food and other resources of the Americas? Could the present 6.7 billion people exist without the grain from Argentina and the USA? Could the earth support 6.7 billion people without all of the plant foods from the Americas that are used today around the entire planet? How would all of humanity function today without the oil, iron ore, and other minerals that come from the Americas?

The answer is very simple and very clear—the planet could not support the 6.7 billion of us without the food and other resources of the Americas. If, as Columbus and every other European believed, the continents of North and South America did not exist, humanity would have had a catastrophic reduction in population before it reached 6.7 billion human beings because of the lack of resources.

As there are no new worlds left to discover, there are no new worlds to provide resources for the benefit of humankind. We are stuck on the planet earth with a finite amount of resources that will be used up. The question is—how long until humanity destroys itself? I ask anyone who believes that population growth can continue, to set forth how the present 6.7 billion human beings could survive on this planet without the resources of North and South America. While at this time I do not have evidence to support the following statement, it is very likely that humanity has used more of the earth's non-renewable resources in the last 25 or less years than humanity has used since humankind evolved from the apes.

THERE ISN'T ANY FIX FOR PERPETUAL GROWTH

No argument can change the fact that the earth is finite and, therefore, resources are not infinite—they are limited and will be exhausted at some time in the future. Humanity must understand, if it wants to exist on this planet for even a short period of time, that it must treat the resources the earth can provide, as a person would treat a bank account. If a bank account pays 4% interest per year and the owner withdraws 5% per year eventually the bank account balance will be reduced to zero. If a person wants his/her money in the bank to last, he/she cannot withdraw each year more than the interest paid by the bank. If humanity wants the resources of the earth to last, for even a short period of time, humanity cannot use (withdraw) more resources than the earth can replenish each year. No new technology or environmental act can change that fact.

New technologies can increase the amount of resources the earth can provide annually to support humankind, but only by a limited amount.

New technologies can reduce the amount of a resource needed for a unit of production, but only up to a limited point. New technologies will never increase the amount of resources the earth can provide to infinity and new technologies cannot reduce the amount of resources needed for a unit of economic production to zero. Increasing population will always overwhelm new technology. If new technologies permitted the earth to support 20 billion human beings, population growth would have to cease at that point. If it did not cease, and population continued to grow to, for instance, 30 billion human beings, there would be resource wars due to the lack of resources. If new technologies were then developed which permitted the earth to support 30 billion human beings, at that point population growth would have to be reduced to zero because if population continued to grow above 30 billion people, resource wars would become inevitable.

AT MOST THE EARTH COULD SUPPORT ONE BILLION ON AN AMERICAN LIFE STYLE

The USA has about 4.6% of the world's population (306 million ÷ 6.7 billion) and uses about one-third of the resources of the planet. (Some experts take the position that the Americans only use between 25% and 30% of the earth's resources. While there may be a small disagreement about the usage of resources by the Americans, the principle remains the same.) If everyone on the planet used resources (assuming no additional resources were used) in the same manner as the population of the USA, the earth could support only three times the population of the USA or only 918 million people. It is highly unlikely that additional resources could be used on an annual basis without destroying the ability of the planet to support human life for even a very short period of time. Therefore, we have to assume that no additional resources can be used on an annual basis and that the maximum population which the earth can support at the American standard of living is 918 ($3 \times 306 = 918$) million human beings. For the sake of argument, assume that the standard of living is reduced and the efficiency of usage is increased by a combined factor of four, that assumption would mean that the earth could support a maximum of 3.67 ($4 \times 918 = 3.67$) billion people, far below the current population of 6.7 billion people.

The only way for the planet to support the current level of 6.7 billion is for a reduction in the standard of living and an increase in the efficiency of usage to reach a combined factor greater than 7. There cannot be any dispute that a substantial portion of the rest of humanity would like to achieve the American standard of living—and use the resources of the planet at the same level as those resources are used by Americans. Based on the facts, math and concepts set forth in this paragraph, a strong argument can be made that a population level greater than 918

million will result in resource wars. The Earth's resources could not support a larger population at the American level of consumption. Therefore, a strong argument can be made that humanity must take immediate steps to reduce the population of humanity to 918 million or below.

DOUBLING THE ECONOMIC OUTPUT OF THE PLANET JUST TO STAY EVEN

According to the estimate of the US Census Bureau, the human population of the world is estimated to increase by over 41% by the year 2050---to go from the current 6.707 billion to 9.441 billion. That means that just to stay even there would need to be an increase in the number of autos, trucks, trains, airplanes, farm tractors, pants, dresses, drugs, hospitals, x-ray equipment, houses, roads, bridges, TVs, radios, phones, computers, fertilizer, clean water, food, electrical generation, oil pipelines, gas pipelines, sewerage treatment plants, etc., of 41% by the year 2050, if the ratio between these items and people remains consistent. If we take into account the number of vehicles that will wear out one or more times between now and the year 2050, the number of those vehicles that will have to be produced will be extremely large. Assuming international trade remains at the same level in relation to the increase in population, the number of ocean going vessels would have to increase by 41%. Again, taking into account the number of vessels that will wear out and have to be replaced one or more times between now and 2050, the number of new vessels that will have to be produced becomes exceedingly large. Even with recycling, the question arises---will there be enough iron ore and other resources to permit the necessary level of manufacturing to provide the replacements? The number of dwelling units will have to be increased by 41%, and the things that go into dwelling units will have to be increased by 41%. In simple terms, just to stay even, everything used or produced by humanity would have to be increased by 41%. And none of these numbers include the increase in the per capita usage of resources due to the increase in the standard of living in China, India, America, etc.

It is highly unlikely that the United States will be able to increase production by any amount, let alone the amount needed to satisfy the needs of the growing US population. According to the analysis done by Chris Clugston, architect of the "Societal Over-Extension Analysis" the extraction from the earth of 87% of the minerals and metals essential to the functioning of America's industrial economy have peaked and it will be difficult, if not impossible, to increase their production in the future. The inability to increase production is not due to finances or ineptitude, but rather due to the fact that nature has limitations---resources are finite and the US and all nations of the world have already used the

resources that are easiest to obtain. Go to www.wakeupamerika.com (it is spelled with a "k" and not a "c") to read Clugston's detailed analysis of the ability of the earth to provide resources to humanity in the future. See also his book "Scarcity" which should be published in the near future.

Nonrenewable natural resources (NNRs) --- fossil fuels, metals and nonmetallic minerals-- serve as the raw material inputs to our industrialized economies, as the building blocks that comprise our industrialized infrastructure and support systems, and as the primary energy sources that power our industrialized societies. Our modern industrialized existence is enabled almost exclusively by enormous and ever-increasing quantities of NNRs. As an example, NNRs comprise approximately 95% of the raw material inputs to the US economy each year. American currently (2008) uses nearly 6.5 billion tons of newly mined NNRs per annum-- an almost inconceivable 162,000% increase since the year 1800--- which equates to approximately 43,000 pounds yearly per US citizen. Unfortunately, NNRs are finite; and as their name implies, NNR supplies are not replenished on a timescale that is relevant from the perspective of a human lifespan.

More unfortunate, economically viable supplies associated with the vast majority of NNRs that enable our industrialized way of life are becoming increasingly scarce, both domestically (US) and globally. Sixty-eight (68) of the 89 NNRs that enable our modern industrial existence--- including bauxite, copper, iron/steel, manganese, natural gas, oil, phosphate rock, potash, rare Earth minerals, and zinc-- were scarce domestically in 2008. Sixty-three (63) of the 89 NNRs that enable our modern industrial existence were scarce globally in 2008. NNR scarcity is one of the most daunting challenges ever to confront humanity. The information set forth in this and the two previous paragraphs was obtained from work of Chris Clugston, mentioned above.

THE NEXT 42 YEARS

The estimated growth in population from 2008 to 2050 is over 2.7 billion human beings ($9.441 - 6.707 = 2.734$). Since the estimated human population was only about 2.5 billion in 1950 (Exhibit 1), the projected increase in population of 2.7 billion means that in just 42 years humanity will have to construct more homes than were in existence on the entire planet in 1950; increase the electrical power output in just 42 years by an amount greater than the world's entire electrical output that existed in 1950; build more roads and bridges than existed on the entire planet in 1950; increase public transportation by an amount greater than all the public transportation that existed in 1950; in just 42 years

build more airports than were on the entire planet in 1950; more than double the amount of food the entire planet produced in 1950; in just 42 years more than double the amount of clean drinking water that is available to all of humanity no matter the location of every person; etc. I could go on listing, at a minimum, hundreds of different things that humanity would be required to do just to stay even.

In simple terms, in just 42 years humanity would have to more than double everything that was in existence in the year 1950. More importantly, the Earth would have to provide the resources that were necessary for those increases --- greater than 100%, since 2.7 billion is greater than 2.5 billion. Hopefully, you get the idea! And this does not take into account the growing demands of China, India, and the rest of the nations on the planet due to an increased standard of living.

A very strong argument can be made that the increased demands placed on the resources of the planet by the increasing standard of living of humanity combined with the projected increase in population, will cause humanity to destroy itself prior to 2050. We are betting the survival of humanity that in just 42 short years, humanity will be able to more than double everything that existed on the earth in 1950, and that the earth can provide the necessary resources for that doubling. (And this does not take into account the resources which were used between 1950 and 2008.)

Let us look at some economic numbers and consider what those numbers are telling humanity about its future. In constant inflation adjusted 2004 dollars, Gross World-Wide Product (GWWP) went from 7.1 trillion in 1950 to 55.9 trillion in 2004, (Exhibit 3)--- in 2004 the world economy was 7.87 times as large as it was in 1950 ($55.9 \div 7.1 = 7.87$). GWWP is roughly equivalent to Gross Domestic Product, but for the entire world. It should be noted that it took from the time civilization started, say 10,000-20,000 years ago, to 1950 for GWWP to reach 7.1 trillion and it took only 54 years ($2004 - 1950 = 54$) to increase to 55.9 trillion. Since GWWP is closely correlated with the usage of resources, we can assume that resource usage increased by the same percentage.

While an increase in GWWP provides greater food and other items for all of humanity, it also indicates that humanity is using the resources of the planet at a rate that cannot be sustained even for a relatively short period of time. Since world-wide population grew only 2.56 times from 2.5 billion in 1950 to 6.4 billion in 2004 (Exhibit 1) ($6.4 \div 2.5 = 2.56$), and since during the same period the GWWP increased by a factor of 7.87 it can be seen that the per capita usage of resources has increased dramatically. Since GWWP represents usage of resources, it can be argued that the average world-wide per capita increase in the usage of

resources was 307% in the 54 years form 1950 to 2004 ($7.87 \div 2.56 = 3.07$). Humanity must consider the effect on its future when both total and per capita resource usage has increased so dramatically in such a short period of time. While I do not have numbers after 2004, it is likely that the trend continued for both total and per capita usage. No, that is not correct. It is almost absolutely certain that both total and per capita usage dramatically increased subsequent to 2004 due to the explosive economic growth of China, India, and the rest of the nations of the world and the increase in population.

In the previous paragraph, I presented a calculation that made the argument that the per capita usage of resources for all the humans on the earth increased by 3.07 times (307%) from 1950 to 2004. For the purpose of this calculation, I will make the reasonable assumption that the per capita usage of resources continues to increase for the period 2004 to 2050. If we assume that the per capita usage of resources for the period 1950 to 2050 was only 5.5 times (550%) (a very reasonable assumption since it increased by 307% in the period from 1950 to 2004) and if we combine that number with the projected/predicted/estimated increase in population of 3.78 times (378%) we can get an estimate of the additional burden placed on the earth by humanity from 1950 to 2050, a very, very short 100 years. Multiplying those two numbers, an argument can be made that the additional burden humanity will place on the resources of the earth over that very short period of time would be almost 21 times (5.50--increase in per capita usage of resources-- x 3.78--increase in population = 20.79). If the assumptions and projections are reasonable, it would mean for every unit of resources used in 1950, almost 21 units of resources would be used in 2050 due to the combined effect of the increase in population and the increase in per capita usage of resources. Humanity is destroying the planet at a rate that will lead to the destruction of the human species in a very, very short period of time.

THE WORLD WILL NOT BE BIG ENOUGH FOR BOTH RESOURCE HOGS---CHINA AND THE UNITED STATES OF AMERICA

China's economy has grown for the last 26 years at the annual rate of 9.5% and is very likely to continue to grow at an extremely high rate. China's economy has probably been the fastest going large economy in the world, on a consistent basis, for the last decade or more. According to a report issued in July 2008 by the Carnegie Endowment for International Peace, China's total economy will surpass the total economy of the United States by 2035 and will be twice its size by the middle of the century (2050). Since the US uses about one-third of the planet's resources, if China's economy were to equal that of the US on a total basis and if the Chinese were to use resources at the same rate as the US, between them they would use two-thirds of the planet's

resources by the year 2035. To put it very bluntly in a manner that everyone and anyone will understand, that will not and cannot happen. The rest of humanity will not permit those two countries to use two thirds of the resources of the planet. Anyone who believes that humanity can increase the usage of the planet's resources on an annual basis to satisfy the demands of China, the USA and the rest of the world without leading to the destruction of humanity has no understanding of our planet and the resources it can provide.

Humanity cannot wait until 2035 to take action regarding China's increasing demand for the resources of the planet. Every second China's demand increases! That demand will not stop and any action taken by the United States or anyone else will not make it stop or even slow it down. If the projections set forth in the report issued by the Carnegie Endowment for International Peace prove to be correct, and if the economy of China is twice the size of the economy of the United States in 2050, just 42 very short years from now, those two countries will consume all of the resources (since the US uses about one third of the Earth's resources and if China's economy were twice as large as the economy of the USA it would use two thirds of the world resources) the earth can produce on an annual basis, leaving nothing for India, Europe and the rest of the world. War must occur prior to 2050 as China and the USA will not be permitted by the rest of humanity to consume all of the resources of the earth. Even if the US used only 25% of the planet's resources and China used twice that amount (50%) for a combined total of 75%, the result would be the same-----the rest of the nations of the world would not permit that to occur.

If that probability does not frighten you, let us examine the situation from a different point of view. Let us review China's consumption of resources, if China's economy were to equal the economy of the US on a per capita basis, and if China were to have a population of only 1.424 billion. China would consume 1.352 billion tons of grain, equal to 66% of the total grain harvest of the entire world in 2004 of 2.0 billion tons. China would consume 181 million tons of meat, equal to 75% of the current meat production of 239 million tons. China would use 90 million barrels of oil per day, exceeding the world's current output of 82 million barrels. China would use 2.8 billion tons of coal, exceeding the earth's current production of 2.5 billion tons. China would use 511 million tons of steel, which is more than the current consumption of the entire Western world. China would use 303 million tons of paper; almost double the earth's current output of 157 million tons. And lastly, China would have 1.1 billion automobiles. Nothing short of war will prevent China's economy from equaling the economy of the USA in the very near future.

The rest of the nations of the world will not permit the United States and China to use all, or almost all, of the resources that our planet can produce on an annual basis. What are the alternatives? Can America and the rest of the world stop China's economic growth? Can America and the rest of the world say to the Chinese people "you cannot consume resources at the same level as the American people—you are second class citizens of the world and the Americans have a God given right to the world's resources and there isn't anything you can do about it"? Remember that the Chinese have weapons of mass destruction and the ability to deliver them any place on the planet. The answers to these questions are self-evident and don't need any discussion.

A number of additional questions must be asked and answered. Will our planet be able to supply the resources that China will need on an annual basis? If the planet could supply the resources China must have on an annual basis, how long would the earth be able to continue that supply—how long before the earth's resources are exhausted?

Again, remember I am only discussing China and the Chinese people. I am not considering India and the rest of the world. What would happen to the environment if the demands were satisfied? Would there be enough fresh water to produce the grain required by the expanded production? What about the rest of humanity? How long could the soil of the world support the production of food and the number of grazing animals necessary for the meat production? I could list 50 or more questions that will need to be answered. However, the questions set forth above should give any thinking individual a shock.

Something to consider about the future of China—in the first three months of 2009, China purchased more new cars than the USA and there is every indication that in the future China will continue to purchase more new cars than the USA, or any other country on the planet.

HUMANITY CANNOT AFFORD TO GAMBLE ON VOLUNTARY POPULATION CONTROL

There are two and only two questions that need concern us---a) when will population and/or economic growth cease (and they must cease--continuous/infinite growth cannot occur on the finite earth) or become negative and b) how will the cessation of growth happen?

There are two and only two ways population growth will cease or become negative, violently or non-violently. There are no other possibilities. Non-violently as used above means that population growth will cease by the intelligent actions of humanity before the cessation of growth by violence.

Non-violently can be divided into two sub-categories--- a) by all of humanity voluntarily agreeing to stabilize and/or reduce population or b) by having society impose a limit on population growth, such limit being enforced by sanctions---coercive population control.

Violence will occur when humanity has exceeded the carrying capacity of the Earth and the struggle to obtain resources begins, which will permit the survival of one group as opposed to all other groups---group A against all other groups, religion A against all other religions, race A against all other races, family A against all other families, etc. At this point there isn't any need to set forth a specific number as the carrying capacity of the Earth. However, that number must be a finite number--it cannot be infinitely large. The carrying capacity is based upon the level of population, the per capita usage of resources, and the length of time humanity is expected to survive on a planet.

A very strong argument can be made that humanity has already exceeded the carrying capacity of the Earth-- the Earth cannot sustain the current population at the current per capita usage of resources for more than 90 years, collapse will commence before the year 2100. A very strong argument can be made that if population growth continues and if per capita usage of resources continues to increase the collapse will commence prior to 2050.

Humanity can exceed the carrying capacity of the earth without collapse starting for a short period of time by drawing down the capital the earth can provide, however, that can only occur for a very short period of time. This analysis is similar to the bank account analysis set forth previously---you can withdraw 6% per year from a bank paying only 4% per year interest for a short period of time--soon there will be no money in the bank to pay interest.

A number of experts believe that population growth will be stabilized not by violence, but by apathy—starvation, disease or other similar factors leading to apathy. I disagree with those experts. If massive starvation were to happen in a country, the leaders of that country would be forced to lash out irrationally (start a war) to obtain the food necessary to prevent massive starvation and the collapse of the social order. If a government did not act to prevent massive starvation and the death it caused, the people would revolt and the social order would collapse. Apathy works for animals, which curl up and die. While some humans would become apathetic, many would not and those who would not would cause the destruction of the social order with their demands. While starting a war may not obtain the resources a country needs to survive, the leadership of that country would have no choice, as the citizens would demand action of some type. I have been asked, what

would happen if a country in the middle of Africa and all of its neighbors were facing massive starvation—how would that situation cause a world-wide catastrophe? While I cannot provide a specific answer to that question, I know the situation would be very unstable and something would happen which would have world-wide consequences.

HUMANITY CANNOT RELY UPON THE CONCEPT OF "DEMOGRAPHIC TRANSITION" TO PREVENT ITS DESTRUCTION

Some of the people who claim that voluntary population control will solve the population problem point to something known as the “demographic transition”. Some years ago a study was done about how the populations of nations evolve. That study claimed that the population of nations evolved in four stages.

a) First stage—high death rate and a high birth rate such that the population remains relatively stable at a low level.

b) Second stage—the death rate substantially falls, but the birth rate remains high—population rapidly grows.

c) Third stage—the birth rate substantially falls bringing the two rates into relative balance.

d) Fourth stage—due to the assumed fact that both rates are generally in balance, the population stabilizes at a much higher level than in first stage.

Humanity must not rely on the concept of demographic transition for the following reasons:

i) The fourth stage does not guarantee that population will stabilize at zero or negative growth. If the fourth stage merely stabilized at a very low level of growth, that would not solve the population problem. Rather it would merely delay for a few years the requirement that humanity solve the population problem. Since population grows in a compound manner, and since compound growth is the most powerful force in the universe, any level of growth will lead to the near-term destruction of humanity.

As set forth herein, if the population growth rate were reduced to one-tenth of one percent (0.0010) population would double in about 700 years. If that rate of growth continued for just 7,000 years there would be ten doublings and population would increase by a factor of 1,000 (actually 1,024). Instead of having of current population of 6.7 billion, the population of humanity would exceed 6.7 trillion. Now to be more realistic! The earth could never support a doubling of the human population and that doubling would occur in about 700 years, if population growth were reduced to the miniscule amount of one-tenth of one percent. In about 2,100 years, about the same length of time from the birth of Jesus to the present, there would be three doublings

resulting in a growth factor of eight and the population would exceed 53 billion of our species ($8 \times 6.7 = 53.6$). Only an insane person would assume that the earth could support in excess of 53 billion human beings.

NO PERSON ON THE FACE OF THE EARTH CAN GUARANTEE THAT THE "DEMOGRAPHIC TRANSITION" WILL REDUCE POPULATION GROWTH BELOW ONE-TENTH OF ONE PERCENT AND KEEP IT BELOW THAT LEVEL FOR THOUSANDS OF YEARS.

ii) There isn't any guarantee that the stabilization will remain in existence for any length of time.

iii) A number of recent studies indicate that upon a society reaching a certain level of affluence, the population again starts to increase

iv) As shown herein, according to the UN the earliest humanity could reach the replacement of fertility (stage four) would be 2050 and that would result in the population not stabilizing until 2120 at a level 50% greater than the level of population in 2050.

v) A number of studies have shown that the concept of demographic transition is a fallacy---it does not seem to be presently working in the Middle East.

vi) There isn't any evidence that the demographic transition will apply to all the nations of the world or be applicable to all groups and religions.

vii) There is a great deal of evidence that a large portion of the male population will not accept the use of artificial birth control when they have sexual relations. Take, for example, the following questions, answered in a national survey. Has your partner or ex-partner ever told you not to use birth control?--25% answered yes. Has your partner or ex-partner ever tried to force or pressure you to become pregnant?--25% answered yes. Has your partner or ex-partner ever taken off the condom during sex so that you would become pregnant?--16% answered yes. Has a partner or ex-partner ever made you have sex without a condom so that you would become pregnant?--24% answered yes. This survey was done in the USA. I hate to think what the survey would show in Africa or other parts of the world. In some cases the male partners punched holes in the condoms or flushed birth control pills down the toilet.

viii) The Catholic Church and a large number of Protestants will never submit to an abortion unless they were forced to do so and without abortion population will continue to increase until billions die horribly.

ix) A large number of countries (we can disagree about the number of countries and their names, but we must agree that a large number of them) will not provide the resources necessary to educate their populations about artificial birth control, to provide cheap or free modern methods of birth control, provide cheap or free abortion clinics, or to take

any other steps necessary to permit their populations to effectively and voluntarily reduce population growth to zero.

x) There isn't any evidence whatsoever that voluntary birth control will reduce population below the current (2011) population of 7 billion, if that is necessary for the survival of humanity.

xi) A large number of children has in the past has meant power to the group to which they belonged. In the past, survival of the group depended upon the number of children they produced. It will be extremely difficult, if not impossible, to convince all groups that their survival does not depend on the number of children they produce and to convince them that all other groups are not cheating by having many children while they have few.

xii) At present, according to the UN, only 56% of married women or women in a relationship use modern contraceptive devices. In order for the voluntary action of humanity to reduce population growth to zero, or to make it negative, almost 100% of women and/or men would have to use modern contraceptive devices and this is highly unlikely.

TERRORISTS AND THE POWER OF WEAPONS OF MASS DESTRUCTION

Weapons of mass destruction are now available to about 8-10 nations. It is highly likely that such weapons will become available, in the near future, to many additional nations, non-national groups, religious fanatics and terrorists. Humanity cannot afford the gamble that weapons of mass destruction will be not used when the social order collapses due to population and/or economic growth that the earth cannot support.

Few people realize the power of H-bombs. The A-bombs that were dropped on Japan had the equivalent of about 12,000-20,000 tons of TNT. Modern H-bombs have the equivalent of 12-15 million tons of TNT, an increase of between 600 and 750 times. While I am not an expert on the destructive power of H-bombs, I believe that one modern H-bomb would kill everyone within 5,000 square miles and would destroy all property within the same area. One properly placed H-bomb would kill everyone in New York City and reduce to complete rubble all, or almost all, of the buildings in New York City. The fallout would probably kill millions of people on Long Island and other areas around New York.

Based on the fact that a number of industrialized nations have reduced their population growth to zero or even to a negative number and based upon other concepts, some demographers have predicted that world-wide population will stabilize at around eight billion before the year 2100. On the face of it there are two major problems with that position. First problem— there isn't any research which supports the proposition that if population stabilized at eight billion the earth could support that number of human beings for a reasonable length of time at a standard of living

which would not cause wars. Or to put the problem more simply— is eight billion too high for humanity to survive for any reasonable length of time at a standard of living that will prevent wars? Second problem--- those who believe stabilization at 8 billion will solve humanity's problems have not taken into account the increase in per capita usage of resources that will occur between now and 2100. They also have not discussed or considered the probability that in order for humanity to survive, population will have to be substantially reduced. If population did not stabilize at eight billion, and forever remain at eight billion or lower, but continued to grow, humanity would be destroyed.

I don't believe it is in the best interest of humanity to bet its survival on the prediction that population will stabilize at eight billion. For humanity to bet its survival that the planet could support eight billion would be very unwise as other experts believe that the planet cannot support a population greater than one or two billion human beings for a reasonable length of time. In fact, some experts believe the sustainable number of human beings is far lower, some as low as 500 million. Don't forget the latest projection by the UN experts does not agree with those who believe that population will stabilize at 8 billion before 2050. No one knows which group of experts will be right, or even if either group will be right. However, we are discussing the survival of humanity, and if humanity makes the wrong choice our entire species will be destroyed. One and only one war with weapons of mass destruction will destroy humanity or at least destroy civilization as we know it. Humanity cannot afford to make a wrong choice. Humanity must take the course of action least likely to result in a war with weapons of mass destruction. Lastly, for the reasons set forth above, I do not believe the voluntary action of humanity will succeed in reducing population growth to zero, or making it negative.

How do people, businesses and governments determine a course of conduct? First, they determine the chance of a future event happening and then they determine the harm or benefit that would accrue if that event occurred. Since humanity will be destroyed if the wrong decisions are made, humankind must err on the very conservative side. Humankind cannot afford to make the wrong decisions—nations, fanatics, and others, have or will have in the very near future weapons of mass destruction which could wipe humanity off the face of the earth.

Anyone who doubts that humanity is at a crossroad and that the future destruction of our species is close at hand should just read the daily newspaper or listen to the daily news media. If a course of conduct taken by humanity has even a one, two or three percent chance of being wrong, humanity cannot afford that course of conduct—if a wrong decision is made our species is doomed. Any course of future conduct taken by humanity must reduce the risk of the destruction of our species to as

close to absolute zero as possible. **To gamble that humanity will voluntarily control population and economic growth for any period of time is too high a risk.**

The only future course of conduct that reduces the chance of the destruction of humanity to as close to zero as possible is to immediately undertake a course of conduct that reduces population—negative population growth. As shown herein, a voluntary reduction in population growth to zero or to a negative number will not be achieved in time to prevent the destruction of humanity and would probably never be achieved. Imposed or coercive population control is the only way population growth will be reduced to zero or made negative in time to prevent the destruction of humanity. Almost, without exception, every intelligent/rational person on the face of the earth understands that for humanity to survive population growth must be reduced to zero. I do not know of one single rational person who believes that the earth can support 500 billion human beings. Population growth must be stopped at some point in time if humanity desires to survive on this planet.

However, there is a disagreement as to the method of stoppage—voluntary or imposed/coercive population control, and there is a disagreement as to whether population growth has to be made negative or will zero growth suffice. Additionally, there are many disagreements as to when zero or negative growth must be achieved to prevent the destruction of our species.

We must now consider facts that cannot be challenged, facts that bring into question the prediction of some demographers that humanity will voluntarily stabilize world-wide population at eight billion or lower by 2100. The facts set forth below show that humanity will never voluntarily reduce its population growth level to zero on a world-wide basis. Even if humanity were able to voluntarily reduce population growth to zero, humanity would never voluntarily maintain that zero growth level as long as humanity existed on the planet. Every living thing, including humanity, has always produced, on average, more individuals than the environment could support causing a struggle for existence. In order for the experts who believe that humanity is going to voluntarily stabilize population at eight billion to be correct, all of humanity would have to voluntarily reduce the level of reproduction to zero growth and it would have to remain at that level for as long as humanity existed on the planet. The important words are “as long as humanity existed on the planet.” At no time in the future could population increase as that would void the prediction of a stabilized population. In order for population to be voluntarily stabilized or reduced, every group, nation, religion and even every family and individual would have to limit their reproductive ability.

Reproduction is skewed in favor of population growth. A male can father almost an infinite number of children; a woman can have 10 or more children. Within the last few months a woman in the US had her 19th child and now is pregnant with her 20th child. A woman cannot have a negative number of children to bring the average number of children down to two (approximate replacement value). If one woman had 10 children, it would require that four other women have zero children to bring the average down to two children per woman. If a woman had eleven children, that would require nine other women to have only one child to bring the average down to two children per female. Since compound/geometric/exponential growth is so powerful and overwhelming, a single very small group that did not control its growth would destroy the delicate balance, resulting in population exploding and destroying all of humanity. For example—if a group of just 10 million (less than two tenths of one percent of the current population) were to grow at the compound of one percent a year, its population would exceed the current population of the world in less than 700 years.

Two side comments—to the best of my knowledge between them Osama Bin Laden and his father had over 60 offspring---in February 2010 an orthodox Jewish woman died at the age of 93 leaving about 2,000 (that number again 2,000) living descendants, according to an article in the New York Times.

At present (2011) the average fertility rate throughout the world exceeds replacement value. The average fertility rate for all of humanity is higher than replacement level, even though a number of nations have a fertility rate below replacement level---many European and Eastern European nations have a present fertility rate below replacement level. If humanity were able to instantaneously reduce the average world-wide fertility rate to replacement level, population would grow for 70 years until 2081 before it stabilized and it would stabilize at a level 50% greater than the current population or 10.5 billion. In order for population to stabilize at 8.0 billion by 2100 the population would have to decrease from 10.5 to 8.0 in just 19 years (2100 - 2081 = 19), and that will not happen. Another way for population to stabilize at 8.0 billion by 2100 would be for the average world-wide fertility rate to instantaneously decline to below the replacement level, and that will not happen.

RELIGION---A POTENT FORCE AGAINST POPULATION STABILIZATION

Religion is still extremely powerful and, in all probability, will grow even more powerful in the future. Almost every religion demands children, and children are a source of power for a religion or any group. The Catholic Church demands sex without any artificial birth control. The Catholic

Church demands that its followers have sex without a condom, even if one of the married partners has AIDS. And the rhythm method demanded by the Catholic Church is not birth control. There is a very good reason why the rhythm method is called “Vatican Roulette”—it is more than a joke, it is a disaster for all of humanity. And to be very blunt, the Catholic Church deliberately provides incorrect and misleading information to its followers regarding birth control.

Cardinal Alfonso L. Trujillo, (now deceased) the former head of the Vatican’s Pontifical Council for the Family advised people in countries stricken by AIDS not to use condoms, despite a widespread scientific consensus that condoms are impermeable to the HIV virus. He stated, “The spermatozoon can easily pass through the ‘net’ that is formed by the condom.” The Church has even told its followers that children have been born with IUDs stuck in their heads.

Many Protestant denominations say life begins at fertilization and, therefore, oppose abortion. If life begins at fertilization and if upon fertilization God gives the fertilized egg a soul, God is the greatest murderer who ever existed---many fertilized eggs do not attach to the womb and are flushed out when the woman menstruates. With the thinking of religion that is set forth above, everyone who believes that humanity will voluntarily reduce population growth to zero or make it negative before billions die due to the inability of the earth to provide the resources humanity needs to survive are just plain wrong and condemning billions to horrible deaths.

The President of The American Life League stated— “the mind set that invites a couple to use contraception is an anti-child mind-set. We oppose all forms of contraception.” At a conference sponsored by the Pro-Life Action League, the speakers assailed contraception on the grounds that it devalues children, harms relationships between men and women, promotes sexual promiscuity, and leads to falling birth rates, among other social ills. The President of that organization told the Chicago Tribune that contraception is more the root cause of abortion than anything else.

The beliefs of the people who belong to those organizations make it absolutely clear that voluntary population stabilization will never be achieved prior to the destruction of humanity. The Catholic Church and most Protestant denominations oppose abortion and population growth cannot and will not be reduced to zero without abortion. (According to the Rockefeller Commission appointed by Pres. Nixon no nation ever reduced its population growth to zero without the use of abortion.) The best evidence indicates that 46% of American women had one or more unplanned pregnancies, and 40% of American women had one or more

abortions. We can debate the accuracy of those numbers. However, there isn't any doubt that unplanned pregnancies and abortions are relatively common in the US and would be an important consideration in any attempt to control population growth. Sometimes even the most modern methods of birth control fail or are not properly used, resulting in unplanned pregnancies. While I have not seen similar statistics for the rest of the world, there isn't any reason to believe the numbers are lower. In all probability, the rate of unplanned pregnancies is higher in the rest of the world. Since starting to write this book, I read one statistic that there are about 46 million abortions each year for all of humanity. If that number is correct and if all abortions were stopped by religious fanatics, the human population would increase dramatically.

Let us look at the numbers. The best estimate is that the net annual population growth for all of humanity is currently about 77 million per year. If we add to that number the 46 million abortions set forth above representing children who would have been born if abortions did not occur, the net annual population increase jumps to about 123 million per year. If that rate of growth continued for the 39 years between 2011 and 2050 the total growth would be 4.797 billion ($39 \times 123 \text{ million} = 4,797 \text{ billion}$) and the population would be very close to 12 billion in 2050 (the population in 2011 will be 7 billion plus the growth of 4.797 billion = 11.797 billion). And that number does not take into account a probable increase in births due to a larger population each year of women in their child bearing years.

Orthodox Jews and members of the Fundamentalist Church of Latter Day Saints (Fundamentalist Mormons) have children beyond number. Due to their exploding population growth, Moslems have grown to the largest religion in the world, surpassing the number of Catholics on the planet. While many people do not follow the dictates of their religion in the area of birth control, enough follow the dictates of their religion to prevent the stabilization of population at any number and stabilization is not what is required, if humanity wants to survive. What is required for humanity to survive is for population growth to become negative and for the population of humanity to be substantially reduced.

In order for population growth to reach zero or become negative on a voluntary basis, religion will have to be drastically modified to permit the use of artificial birth control and abortion. Since there isn't sufficient factual evidence to support the concept that both the Catholic Church will change its position on birth control and abortion and the other religions will change their positions on abortion in time to prevent the destruction of our species, the demographers who predict stabilization of world-wide population at 8 billion or less by 2100 are incorrect in their predictions.

A recent analysis has indicated that the declines in fertility have stalled in a number of sub-Saharan countries. This fact, assuming it is a fact, does not bode well for those who have taken the position that voluntary action of all of humanity will reduce population growth to zero. The US Government under the Bush Administration has refused to fund any program in any part of the world that even discusses abortion with the people it serves. Population growth will not be reduced to zero or become negative on a world-wide basis without abortion. The refusal of the US Government under the Bush Administration to fund any program which discusses abortion must lead to the conclusion that population will not stabilize at eight billion or below at any time in the future.

For the past few years Congress annually appropriated \$34 million to the United Nations Population Fund. However, in response to the pressure bought by the religious fanatics who are opposed to abortion, the money was never given to that organization by the Bush administration. Results of the action by the Bush administration are-- according to those who are concerned about the future and health of humankind-- 2 million unintended pregnancies, about 800,000 abortions, 4,700 maternal deaths and 77,000 infant and child deaths.

Religious fanatics do not care about humanity and would rather see all of humanity destroyed because of their belief about abortion. Since the first draft of this paragraph was put to paper, the Bush Administration was replaced by the Obama Administration, and that administration has indicated that it will take a significantly different position from the Bush Administration on birth control and abortion. However, that change does not insure that in the future a Republican Administration will not reinstate the actions of the Bush Administration. Voluntary population control will never reduce population growth to zero or make it negative without the total support of the USA and that support cannot be guaranteed.

A side comment--within the last few months Iran changed its position from supporting population control to almost demanding that women have as many children as possible. Why? The answer is simple-- for political power and for cannon fodder for its army.

UNIVERSAL VOLUNTARY BIRTH CONTROL----A PIPE DREAM
HUMANITY CANNOT AFFORD

Professor Joel Cohen, of Rockefeller and Columbia Universities, wrote on Page 143 of his book (published in 1995) "How Many People Can the Earth Support?"— "If the eventual total fertility rate were 1.96 children (one-tenth of a child less than replacement level), the population size

would rise from 5.3 billion in 1990 to 7.8 billion in 2050, then decline, dropping to 5.6 billion by 2150 and continuing steadily downward. If the eventual total fertility rate were 2.17 children (one-tenth of a child larger than replacement level), then population would rise to 20.8 billion [the 20.8 billion is based on the starting number of 5.3 billion in 1990] by 2150 and continue upward. The United Nations commented and I [Joel Cohen] agree; 'Perhaps the major conclusion is ... there is a wide range of uncertainty regarding the future size of the world population.... At the level of the individual couple, if it is assumed reasonable that their behavior will result in exactly 2.06 children on average [replacement level], it is probably just as reasonable to assume that the average might be 1.96 or 2.17 children.'"

Let us examine the above quotation from Professor Cohen's book. First, he was using 1990 population figures. Since 1990 the human population has grown from 5.3 billion to over 6.7 billion in 2008 when I started to write this book and has reached 7.0 billion in 2011. More importantly, the total fertility rate has not decreased to either 1.96 or 2.17. Rather, according the best estimate of the UN the total fertility rate is about 2.55 for all of humanity. Both the UN and Professor Cohen make it clear that predicting the future fertility rate cannot be done with 100% accuracy. Therefore, there is a risk to any population prediction and humanity cannot afford to bet on the achievement of zero population growth by voluntary action before the tipping point is reached that will result in the destruction of humankind.

In order for population growth rate to be reduced to zero the total fertility rate would have to be reduced from the current 2.55 to replacement level (about 2.06-2.10) and remain at replacement level forever into the future. It is more than highly unlikely that such a reduction could be voluntarily achieved prior to the destruction of humanity. In fact, it is highly unlikely that the total fertility rate will ever be voluntarily reduced to the replacement level. The total fertility rate represents the number of children to whom the average woman gives birth. That means that the average woman currently gives birth to 2.55 children, according to the US Census Bureau's most current statistics. However, you must not confuse the reduction of the total fertility rate to 2.06, the replacement value, with a stabilization of the population. There is something called "demographic momentum". Even if the total fertility rate were reduced to replacement level, population would continue to increase for about 70 years and then, and only then, would it stabilize at a level 50% greater than the level when the replacement level of total fertility was achieved. For example, if the replacement level were reached in 2050 and if the population at that time were 9.4 billion, the US Census Bureau estimate, then population would continue to grow and not stabilize until 2120 at about 14.1 billion. The question would then become—how long could the

earth's resources support that level of population at the then level of per capita usage of the earth's resources?

The most important point to be obtained from Cohen's book is that if the total fertility rate was reduced to just one-tenth of a child greater than replacement level (2.17) starting today the human population would far exceed 20.8 billion in 2150. It is highly unlikely that humanity will ever achieve a population close to 20.8 billion, as the earth will not be able to provide the resources necessary even to get close to that level. Humanity cannot afford that gamble and must take all steps necessary to prevent the continued growth of population.

Lester Brown (recipient of the MacArthur genius award and other awards too numerous to list) of the Earth Policy Institute wrote "The Plan B [his plan for the future] goal of stabilizing population is set at 8 billion or lower simply because I [Lester Brown] do not think world population will ever reach the 9.2 billion projected by the UN demographers for 2050. The vast majority of the 2.4 billion people projected to be added by 2050 will be born in developing countries---countries where the land and water resource base is deteriorating and hunger spreading. Many support systems in these countries are already in decline, and some are collapsing. The question is not whether population growth will come to a halt before reaching 9.2 billion but whether it will do so because the world shifts quickly to smaller families or because it fails to do so—and population growth is checked by rising mortality." And "rising mortality" equates to massive horrible deaths for billions of our species. Mr. Brown has presented humanity with a choice, immediately start to reduce population or suffer the consequences in the form of the horrific deaths of billions of human beings and the collapse of civilization.

The UN published a table in 2007 that stated that only about 56% of women worldwide aged 15-49 married or in a union used modern contraception. About another 7% used traditional methods—the rhythm method, withdrawal, or other traditional methods. In reality these methods are almost useless and must not be considered birth control. The other 37% used nothing. In order for the total fertility rate to be reduced to replacement level almost 100% of women/couples will have to use modern means of contraception—about a doubling of the current usage of modern contraception. There is not one single drop of evidence that would support the proposition that by 2050 there will be almost a doubling of modern contraceptive use---going from the present 56% to almost 100%.

To be very blunt, modern contraceptive use will not even approach 100% because many men are too "macho" to use a condom and would force their wives or girl friends to have sex without a condom or any other type

of artificial birth control that they believe would interfere with their sexual pleasure. Also it would require the Catholic Church to change its position on the use of artificial birth control, since a sufficient number of Catholics still follow the dictates of the church regarding contraception to affect the overall population growth of humanity. The Catholic Church cannot change its position on artificial birth control. Why? If the Church were to admit its position on birth control were incorrect, it would then have to admit that all the other positions of the Church could be incorrect and could be subject to attack. In addition to a dramatic change by the Catholic Church, every other religion and culture would have to change such that the usage of modern contraception would not only be permitted, but deemed something that is necessary for the survival of humanity.

The demographers that predict voluntary population stabilization underestimate the hatefulness, arrogance, religious fanaticism, and selfishness of most of humanity. Justice Scalia, of the US Supreme Court, has nine children and Bobby Kennedy Jr., who is involved in environmental causes, has five children. The Republican nominee for President of the USA in 2008, John McCain, has at least four biological children and his choice for Vice-President, Sarah Palin, has five biological children. Nothing shows the arrogance of religious fanatics more than Palin not aborting her fifth child, which she knew to be a Down Syndrome child. Nothing shows the failure to understand the harm the exploding population is doing to humanity more than McCain agreeing with the religious right that life begins when the egg is fertilized by the sperm.

Such a belief by The President of the USA would eliminate almost every method of birth control that depends on hormones, and drive population growth to new heights. If these supposedly intelligent individuals do not understand the harm they are doing to humanity, I doubt that the rest of our species will voluntarily reduce population growth to zero or make it negative prior to a major catastrophe. No, that is not correct. I can state with almost absolute certainty that humanity will not voluntarily reduce population growth to zero or make it negative prior to the horrible destruction of billions of human beings.

NO POWER ON THE EARTH OR IN THE HEAVENS WILL PREVENT HUMANITY FROM MURDERING BILLIONS AND BILLIONS OF HUMAN BEINGS OR POTENTIAL HUMAN BEINGS. AND I DO MEAN MURDER.

Since population growth must stop and will stop and no power on earth or in the heavens can change that fact because the earth is finite, humanity has two and only two choices; reduce population growth to zero before birth by artificial birth control and abortion, or suffer the

reduction of population after birth by war with weapons of mass destruction and/or ethnic cleansing and/or concentration camps and/or other horrors beyond the imagination. **Since even the most effective artificial birth control methods sometimes fail or are not used properly, or not used at all in the heat of passion, population growth cannot and will not be reduced to zero without the availability of abortion to every human being on the face of the earth.**

The Rockefeller Commission appointed by President Nixon could not find a nation that controlled its population without abortion—no nation will be able to reduce its population growth to zero or make it negative without abortion being available to its citizens. The rhythm method demanded by the Pope and the Catholic Church is not birth control. If population growth is not stopped by artificial birth control and abortion, the population of humankind will continue to increase and at some point in time in the very near future there will be resource wars over diminished resources—resources per capita will shrink such that war is inevitable.

Those who claim to be pro-life because they oppose artificial birth control and/or abortion are, in reality, pro-death---the deaths of billions of living, breathing human beings. And no sophistry can modify the previous statement. Unless the Pope, every cleric of every religion, and the rest of humanity understand and act upon that fact, humanity is doomed.

To restate what is written above in simple terms, humanity will murder billions and billions and billions of people or potential people and nothing humanity can do will prevent those murders. The Catholic Church and others who oppose abortion call abortion murder. While I do not agree that abortion is murder, I will use the word "murder" in this paragraph for two reasons--a) the Catholic Church and those opposed to abortion describe abortion as murder, and 2) to make a clear point. As indicated above, there are only two times population growth can be reduced to zero or made negative--- before birth and after birth. If population growth is not reduced to zero before birth, population will continue to grow until the Earth can no longer supply the resources that are necessary for the survival of the large population that will result from that failure. Starvation, disease, ethnic cleansing, wars with or without weapons of mass destruction, and other horrors will reduce the population to the level which can be supported by the Earth's resources. I call that murder after birth. Since for the purpose of this paragraph abortion is murder, if population growth were reduced to zero by murders of potential human beings before birth the only choices for humanity to make are when and how those murders occur. Those murders will occur and there isn't anything humanity or any human being or human beings can do that

will prevent those murders. The only choice available to humanity is when and how those murders will happen.

This book is not an intellectual discussion about how many angels can dance on the head of a pin. This book is about what action must be taken for humanity to survive and, therefore, the truth must be stated even though a reader may find the statement horrifying. The truth is that every religious leader who continues to oppose abortion must be executed today and without hesitation for crimes against humanity, as that action is necessary for humanity's survival.

Let me summarize the situation in slightly different words. Since continued population growth must result in wars and/or other horrific deaths, and since population growth cannot be reduced to zero without abortion, humanity has a choice--- destroy tissue in the womb of a woman before birth or destroy life after birth by war, starvation, disease, and other horrors. You may consider the choice immoral. Nature, however, does not care about the concept of morality or care about human morality.

Let us do a little math together and see how population would grow if each of Justice Scalia's nine children had nine children, and this continued just for a few generations (I have chosen Justice Scalia as an example because he is supposed to have a modicum of intelligence and should be known to most Americans as he is a famous Justice of the US Supreme Court):

Generation Number	Number of Descendants
1	9
2	81
3	729
4	6,561
5	59,049
6	531,441
7	4,782,969
8	43,046,721
9	387,420,489
10	3,486,784,401
11	31,381,059,609

If we make the reasonable assumption that each generation averages 35 years, then in less than 400 years (11 generations at 35 years per generation = 385 years) the progeny of Justice Scalia will exceed 31 billion people, about five times the present population of the entire world. And the 31 billion are only the 11th generation. At the time of the 11th generation many of his progeny from the 9th and 10th generations will be

alive. Therefore, the burden placed on the earth by Justice Scalia and his progeny would probably exceed 35 billion people. When asked on a TV program about his nine children, he shrugged and said he was Catholic, as if he had no control over his procreative abilities. If a US Supreme Court Justice turns over control of his body and turns over control of his wife's body and turns over control of the number of his children to religious fanaticism, there isn't any hope that humanity will voluntarily reduce population growth to zero in time to prevent the destruction of our species. If in order to survive, our species must reduce population below the current 6.7 billion, it is an absolute certainty that will never voluntarily occur.

I will not do the math for you. However, if Justice Scalia's progeny continued at the same rate of reproduction for just 4,000 years, their number would exceed the number of atoms, repeat the number of atoms, in the entire observable universe. And 4,000 years is less than the time from the construction of the Egyptian pyramids until today.

Justice Scalia and his children have another very important lesson for all of humanity. If everyone on the planet, repeat everyone on the planet, except Justice Scalia and his progeny, agreed to voluntarily reduce population growth to zero the entire effort would be futile because in just 11 generations his progeny would exceed 31 billion people negating everything the rest of humanity did to reduce population growth to zero. Voluntarily reducing population growth to zero requires the agreement of every single human being on the face of the earth, and that will not happen.

Justice Scalia is not the only religious fanatic on the face of the earth. If there were only an additional 1,000 other religious fanatics and their progeny who acted in the same manner as Justice Scalia and his progeny, their number in less than 400 years would exceed 31 trillion. God Almighty himself could not provide enough food for that number of human beings.

A measure was recently placed on the November 2008 ballot in the State of Colorado declaring that a fertilized egg was a person, a human being, entitled to all the rights of a human being. This measure would eliminate many birth control options---many of the birth control options work by not permitting the fertilized egg to attach itself to the wall of the uterus. Why was such a measure placed on the ballot? The answer--because religious fanatics want to impose their ridiculous religious concepts on all of humanity, and these religious concepts will destroy all of humanity. More importantly, it shows why voluntary birth control for all of humanity will never work; it shows that population growth will never voluntarily be reduced to zero or made negative. The religious fanatics

would rather destroy all of humanity than give up their ideas that have no basis in fact or in morality. A shocking statistic---the best estimate is that 1.4 million pregnancies happen each year in the Philippines and about 500,000 of these are terminated by an abortion.

Anyone who advocates education and raising the status of women as the method of achieving voluntary birth control is making a number of errors:

a) To the best of my knowledge, those who advocate education and the raising the status of women do not claim that such action will convert positive population growth to negative population growth. At best they claim that such action will sometime in the future convert positive population growth to zero growth. Therefore, it is impliedly a basic premise of those who advocate education and status raising that the earth can support, as a minimum, the present population of 6.7 billion. In effect, those who are advocating education and status raising are gambling the survival of humanity on the unsupported belief that the planet can support at least 6.7 billion human beings at the current usage of resources. In reality, those who advocate education and raising the status of women are betting that the earth can support 9.2 or 9.4 billion people, at the then existing per capita usage of resources, as those are the estimates of the human population by the UN and the US Census Bureau in 2050 and there isn't any evidence that those estimates are high. Those estimates take into consideration that a number of countries have reduced their growth rates to zero or made them negative, the effect of AIDS and other diseases, the current trend in women's education and status level, and all other known factors.

b) Those who advocate education and status raising must also believe that once population growth is reduced to zero, it will remain at zero for as long as humanity inhabits the earth. However, there isn't, to the best of my knowledge, any factual evidence that zero population growth will remain zero forever. If population growth did not remain at zero, all humanity would be doing is delaying its destruction, which would occur upon zero growth changing to a positive number. In effect, they are gambling the survival of humanity on the unsupported belief that population growth for all of humanity will remain at zero for as long as humanity inhabits the earth.

c) Under the best of circumstances, it will take many years (no one really can predict the number of years) to educate all, or a substantial portion of, women on this planet and raise their status to a level such that they desire no more than the replacement number of children, and it will take an additional number of years before women have the guts to talk to their husbands/boyfriends about their desires. Then it will take additional years for the husbands/boyfriends to accede to the desires of the women. After that long period of time, it will take many more years before the reduction in births affects the demographics of our population.

d) Even if the replacement number of children were achieved by 2050 that would not be the end of the story; population would increase substantially subsequent to 2050 for many reasons:

i) The population would be skewed in 2050 in favor of young people who had not reached the age of reproduction or just had reached the age of reproduction. That fact would cause population to increase for a period of about 70 years until it stabilized;

ii) The average per capita usage of resources would almost certainly increase subsequent to 2050 putting a substantial burden on the ability of the earth to support humanity;

iii) It is likely the life span of the average human will continue to increase after 2050, also putting an additional strain on the ability of the earth to support humanity;

iv) During the expanded life span of the average human, additional humans would be born increasing the population, which also would put an additional burden on the earth's ability to support humanity.

To put it in simple understandable terms—even if each woman achieved the replacement level starting in 2050, that fact would lead to the short-term destruction of humanity—the earth could not support the increased population combined with the increase in the usage of resources for any reasonable length of time.

e) There isn't any evidence that education, raising the status of women, time, etc., will overcome the demands of religion or culture in time to prevent the destruction of humanity.

One may be justified in questioning any statement that the earth will be unable to provide the necessary resources for humanity to survive on this planet for a reasonable length of time at a reasonable standard of living. One can challenge my claim to predict the future with any degree of accuracy: no one can predict the future with any degree of accuracy. But I will offer a counter-challenge--- just read the newspaper every day; just listen to the media every day; just examine the problems facing humanity set forth in this book; and just consider any additional problems you know and ask yourself—are you ready to bet the survival of your children, grandchildren and great-grandchildren that the author is wrong?

The Food and Agricultural Organization of the UN (FAO) has issued a sobering forecast on world food production. If the global population reached 9.1 billion by 2050, the FAO has projected that world food production would need to rise by 70% and food production in the developing world would need to double. Of course, unless population decreased subsequent to 2050 the amount of food produced annually would have to forever remain at those increased levels. While no one can predict the future with total certainty, it is almost certain that those

levels of food production could not be achieved, let alone maintained forever. The forecast of the FAO did not take into account the possibility that population would be greater than 9.1 billion in 2050 or that population would continue to grow subsequent to 2050.

In November 2011 the FAO issued a report that stated that 25% of the world's land was "highly degraded" with soil erosion, water degradation, and biodiversity loss. Another 8% was moderately degraded, while 36% was stable or slightly degraded. The UN also found that around the world water is becoming ever more scarce and salinated, while groundwater is becoming more polluted by agricultural runoff and other toxins. And the degradation of the Earth's soil is continuing and will continue into the future as the population rises until there is a sudden production collapse causing the deaths of billions.

ISRAEL, THE PALESTINIANS, AND WAR WITH WEAPONS OF MASS DESTRUCTION THAT MUST HAPPEN IN THE NEAR FUTURE

In order not to have resource wars with massive death and destruction, not only will world-wide population growth have to immediately be reduced to zero or made negative on the average over the entire world, but also population growth will have to be reduced to zero or made negative in many areas of the world independent of the world-wide average. Former President Carter, in his recent book, wrote that in 1948 Gaza had 90,000 Arabs, in 1967 270,000 Arabs, and in 2006 the number of Arabs reached 1.4 million. He also wrote that the Arab population of Gaza was growing at the compound rate of 4.7% per year in 2006. At that rate of growth the doubling time is about 15 years. If his numbers are correct, and if that rate of growth continues for just 60 years, the Arab population of Gaza will reach 22.4 million ($1.4 \times 2 \times 2 \times 2 \times 2 = 22.4$).

While no one can accurately predict the consequences of such a population in such a small area with so few resources, it would be extremely unwise to rule out a war between the Arabs and Israel over resources, including water, resulting in the use of weapons of mass destruction. There are many other situations—situations in which opposing religious, ethnic or other groups exist in close proximity to each other with limited resources for which they compete. A simple question for you to consider---if the growth of the Arab population were to continue at the compound rate of 4.7% for just 60 years and reach 22.4 million, what would be the chance of a war with weapons of mass destruction happening before 2068 between the Arabs and Israelis? Are you willing to bet the lives of your children, grandchildren, and great-grandchildren on the answer? No! By not taking action, by your failure to demand that population growth become negative today, you are betting

the lives of your children, grandchildren and great-grandchildren and that is a very stupid gamble. And the only way to make population growth negative is by coercive population control.

Those opposed to imposed or coercive population control must logically take the position the human population can increase forever, can become infinitely large, or that humanity will voluntarily reduce population growth to zero or make it negative prior to reaching the tipping point which will result in the destruction of humankind. If those opposed to coercive population control are unable to present a convincing case, based on facts and logic (and not based on hopes and desires) that humanity will voluntarily reduce population growth to zero or make it negative prior to the destruction of civilization, they then must agree that the only way to save humankind from destruction is by imposed or coercive population control. To gamble the survival of all, and I mean all, of humanity on voluntary population control for as long as humanity exists on the planet is a very irrational bet---if the bet is lost all of humanity is destroyed.

Even if there is only a one or two percent chance that humanity will not achieve a stable population by voluntary birth control in time to prevent one or more major catastrophes, it still is a foolish bet and foolish gamble—if the gamble is lost, all or almost all of humankind will be destroyed. Anyone who is opposed to what is written in this book and any reviewer who disagrees with what is written herein has an obligation to show by facts and logic (and not hopes and desires) that the human population can become infinitely large or that the chance of voluntary population control succeeding is greater than 98 or 99%.

More than a few experts who have studied the relationship between the population of humankind and the resources which the earth can provide on an annual basis have come to the conclusion that the earth cannot support more than one or two billion people for any reasonable period of time at a reasonable standard of living. See the writings of James Lovelock of Gaia fame, Professor David Pimental of Cornell University, Richard Heinberg of the Post Carbon Institute, Chris Clugston, William Catton and many others. Some experts have even put the figure at 500 million or below. Of course, no one knows if those experts are or will be correct. However, a few simple questions must be asked and answered—what action should humanity take today if there is even a 10% chance that the experts are correct? If humanity does nothing and the experts are correct, then what happens? Can anyone say with absolute certainty that the experts are wrong and that the earth can support the current 6.7 billion who inhabit it, or the increased number of humans predicted for the year 2050, based on the problems presently facing humankind, and based upon the increased per capita usage of resources? Almost

every major problem facing humankind in the 21st century can be solved or greatly reduced if population were substantially reduced.

What action must humanity take today in order for humanity to survive for a limited period of time (for argument, say 5,000 years—dinosaurs ruled the earth for about 160 million years) at an average standard of living that does not cause resource wars? Answer-- the population of the world has to be reduced below the current 6.7 billion. First, can a rational argument be made that this question is nonsense and never will have to be asked and answered? If this question should be answered, then this is the most important question facing the human species. The answer is very simple---the only course of conduct that will prevent the destruction of humanity is to immediately reduce population by coercive population controls.

Let us examine the problem differently—since the earth is finite, population growth must stop at some point in time. What is better for humanity---for population growth to stop at eight or more billion, or to stop at less than one billion? What increases the chances of long-term human survival---using the resources of the earth to support eight or more billion, or using the resources of the earth to support less than one billion? It is a very simple question—what course of conduct gives humanity the best chance of surviving? I challenge any reader and/or any reviewer who claims to be intellectually honest and who disagrees with the conclusions and proposals contained in this book, to write an essay that supports the concept that a population of 8 billion will increase the chances of the long-term survival of humanity as opposed to a population of 1 billion.

There are three ways population growth can be reduced to zero or made negative—a) by war, starvation, disease, ethnic cleansing, and/or some other horror beyond the imagination of almost every reader of this book after humanity has reached or exceeded the carrying capacity of the planet; b) by the voluntary action of all of humanity for an extended period of time --for the period of time humanity will remain on the earth- - and this must occur prior to humanity reaching or exceeding the carrying capacity of the Earth; and c) by some form of birth control/restriction being imposed by all of society, or by some group which would have the power to enforce whatever rules and regulations are necessary, to reduce population and economic growth to zero or to make both negative; and this must occur prior to humanity reaching or exceeding the carrying capacity of the Earth.

Categories (b) and (c) are sub-categories of non-violence or sub-categories of the intelligence of humankind. Since category (a) (war, starvation, etc.) would result in the destruction of civilization as we know it, it is not a

viable option. For the reasons set forth herein, I do not believe that humankind will voluntarily reduce population and economic growth to zero or make both of them negative prior the deaths of billions of human beings and the destruction of society as we know it. If I am correct, then the only way to reduce population and economic growth to zero or make it negative such that humanity will survive is by the action of all of society or a group that will control population by effective sanctions against those who reproduce against the established rules.

Evolution is a fact (Darwinism, the law of natural selection, survival of the fittest) and has been applicable to every species and sub-species that ever existed on the earth. Only religious ideologues or fanatics dispute the existence and applicability of evolution to all living things, large and small, plant and animal. While no one knows for sure when life began on the earth, the best estimate is that life began about 3.6-4.0 billion years ago.

While no one knows the number of species and sub-species that have existed since life started on the earth, it was at least hundreds of millions and probably in the billions. For the purpose of this book I will use one billion. Again, no one knows the average number of generations that each species existed on the earth. For example—if a species lasted for 100,000 years (the time calculated from the initial evolution of the species or sub-species until the time the last member of the species or sub-species dies) and the average length of a generation was six months, then there would be two generations per year for 100,000 years for a total of 200,000 generations.

For the vast portion of time that life existed on the earth only single cell organisms existed, with very short generational times. In fact, substantial portions of the species that exist today are single cell creatures, and substantial portions are very small creatures with very short generational times. I wish to emphasize that the numbers used herein are guesstimates and are only intended to provide the reader with a feel for the average number of generations each species has existed on the earth since life began.

For the purpose of this book I will assume that the average species or sub-species existed for 10,000,000 years and had a generational time of ten days---36.5 generation per year. Based on those assumptions, the average species existed for 365 million generations. Multiplying the two numbers (one billion species and 365 million generations for the average species) gives the number of species generations that have existed on the earth since life began---365,000,000,000,000,000.

What has all this math got to do with the future survival of humankind? I will explain. In every one of those species generations, without a single exemption, when a species generation reached the maximum number of individuals that could be supported by the niche occupied by that species generation, the population was divided into two groups---those who survived to reproduce and those who did not survive to reproduce. For example—if a niche could support 80 individuals of a certain species at a particular time (a species generation) and if 200 young were born, only 80 of the young would survive to reproduce and the other 120 would die off before reproducing—that is all the niche could support.

Many people correctly point out that if humanity were to limit the number of children born, that would affect the ratio of people of working age able to support our older citizens. In other words, there would not be enough working people to support the older generations, causing immense harm to the older generations. Unfortunately humanity has a choice--- let the older generations suffer and perhaps die because there are not enough younger working people to support them or to continue to permit population to grow, resulting in the horrific deaths of billions.

If birth is not limited and many young people are born so that old people can be supported, then when the new young people become old people additional young people would have to be born to support them. In other words, and ever-increasing population would be necessary to support the older generations. And that cannot occur on the finite earth. In order to prevent an ever-increasing population, which will lead to the collapse of civilization and the collapse of the social order, humanity must permit the old people alive today to suffer until a new population balance at a much lower level is achieved. And I am one of the old people.

Many people also correctly point out that limiting births result in a skewing of the sexes-- parents abort females in order to give birth to a son, resulting in the artificial change in the sex ratio. Here too, humanity has a choice--- make it a crime to abort females in order to have a son, or suffer any harm that may result because of the change in the sex ratio. However, no matter what humanity does, it cannot permit continued population growth.

While our species is endowed with exceptional intelligence, our intellectual stature will not earn us an exemption from the same division that other species are subject to. Humanity, too, will be divided into two groups—those who can reproduce and those who cannot reproduce--once humanity reaches the maximum number of human beings that can be supported by the resources provided by the earth-- and the maximum number will be reached in the very near future, if it has not already been reached. Humanity has one and only one niche—the entire planet. Based

on the assumptions set forth above, the odds in favor of a two-group solution for humanity are 365,000,000,000,000,000 to one. The law of natural selection/evolution/survival of the fittest/Darwinism demands a two-group solution, and that law has applied to every living thing in every generation, without a single exception. Humanity cannot afford to gamble that the law of natural selection does not apply to it. Evolution demands every species and sub-species in every generation, once the maximum number of individuals that could be supported by the niche is reached, be divided into two groups—those who reproduce and those who do not survive to reproduce. And if a species does not evolve it is eliminated. If humanity does not evolve, it will be eliminated from the face of the earth.

Every human being may not like the concept of a two group solution, may not like the concept of the reproducers and the non-reproducers, but all of humankind will have to accept that the concept of a two group division is applicable to our species. The name given to the group that reproduces is unimportant.

Now I will try to present the same ideas in a slightly different manner. There are two laws that have applied to every living thing, (plant, virus, bacteria, or animal, large or small) since life started on the earth. These two laws have never been violated and never will be violated. These two laws will apply to humanity no matter their morality and no matter the desires of humanity and no matter the intelligence of humanity. No power can stop the application of these two laws to every living thing. First law---every living thing reached a maximum number of individuals alive at every point in time; no species had an infinite number of individuals at any point in time. I challenge anyone to present an argument that the population of humanity could reach infinity at any point in time. Second law—in every generation in which a species reached the maximum number of individuals that could be supported in the niche occupied by the species, the species was divided into two groups—those who survived to reproduce and those who did not survive to reproduce. The only way humankind would be exempt from the second law, if the human population continued to increase, would be for our niche, the entire planet, to support an infinite number of humans and that will not happen.

The concept of dividing humanity into two groups can be considered to be horrible, disgusting, and contrary to every democratic principle. However, unless anyone opposed to the concept of two groups can show that population can continue to increase forever without causing the destruction of humankind, that person must confront the immediate necessity of reducing population growth to zero, or more realistically making population growth negative. The only way population growth will

be reduced to zero or made negative is to have a method imposed. Those who are permitted to reproduce will not be chosen on the basis of race, religion, color, ethnicity, national origin, or anything similar. It is merely a name for those who are permitted to reproduce because they are the ones best equipped to survive in today's society, or will be best equipped to survive in the future. Who they are and how they are determined will be discussed below.

Let me be very clear-- nature rules the future of humanity and nature does not care about our intelligence or about our sense of morality. Our sense of morality will not cause nature to change its rules. Our sense of morality is totally irrelevant to nature and if our species does not understand that simple fact, our species is doomed. In order to survive our species must change its concept of morality to conform to the rules established by nature.

It may indeed be politically incorrect in contemporary society to suggest that humanity is subject to Darwinian Laws. But it is more important to be biologically correct than politically correct. The leaders of humanity must understand that when humanity reaches the maximum number of humans that the planet can support, like it or not, we will be divided into the two groups described herein. The task before our leaders will be to effect that division as painlessly and ethically as circumstances permit before nature does it with impartial ruthlessness.

I WANT TO MAKE IT ABSOLUTELY CLEAR THAT ANY ACTION RELATING TO THE TWO GROUP SOLUTION SHOULD NOT BE TAKEN UNTIL THE HUMAN POPULATION HAS BEEN VERY SUBSTANTIALLY REDUCED, WHICH WILL TAKE MANY YEARS, AND UNTIL HUMANITY AGREES ON HOW TO DETERMINE WHO WILL PROCREATE AND WHO WILL NOT PROCREATE.

THE DELUSIONAL EXPECTATIONS OF TECHNOLOGICAL SOLUTIONS

Jeffrey Sachs, Director of Columbia University's Earth Institute, made the following statement—"We're living in an era where the technologies that have empowered high living standards and 80-year life expectancies in the rich world are now for almost everybody. What this means is that not only do we have a very large amount of economic activity right now, *but we have potential for vast increases in economic activity as well.* The world cannot sustain that level of growth without new technologies." (Emphasis added.) I totally disagree with Professor Sachs. Anyone who believes that growth of any type can be supported, or believes in the possibility of a vast increase in economic activity on the finite earth, is wrong. New technologies will only delay the problem of reducing population and economic growth to zero, or making them both negative.

New technologies cannot increase the amount of resources on the earth, cannot increase the number of atoms on the earth. All new technologies can do is to reduce the amount of resources used per unit of economic output. New technologies cannot give you something for nothing—cannot produce a unit of economic output without the use of any resource. New technologies can permit resources to be recycled, but since no physical process can be 100% efficient, recycling will only delay and not solve the problems facing humanity. Eventually humanity will run out of resources and recycling will not solve that problem. New technologies will permit substitution of one resource for another resource, but the second resource is also finite in amount and humanity will run out of that resource. To put it in plain and simple words—new technologies are a delusion and will not solve the problems facing humanity.

The concept of new technologies is not only a delusion, but is extremely harmful. As humanity develops new technologies, population and the economy of the world continue to grow and grow and grow. In addition, humanity delays facing the ultimate fact that this planet is finite, while hoping for new technologies to solve the problems it faces.

Anyone who hopes that new technologies will benefit humanity has no understanding of the problems facing our species. Professor Sachs used the word “growth.” There are two and only two choices--- growth can continue forever into the future, or growth will cease at some point in time. Since the earth and its resources are finite, growth cannot continue—growth must stop at some point in time. Only an ignorant fool can believe that growth can continue forever into the future.

There are three and only three choices when growth must stop—in the past, today, or in the future. Since no one can be sure when humankind will have exceeded the carrying capacity of the earth, humanity cannot run the risk of massive destruction and must stop growth today. Since no one can be 100% sure that humankind has not past the tipping point into an irreversible downward catastrophic spiral, or even when such a tipping point will be reached, growth must stop today. Since humanity is presently using non-renewable resources at a rate that cannot be sustained for many years into the future, and since humanity is using renewable resources faster than they can be replaced by nature or by nature and humanity, the carrying capacity of the Earth will not stabilize at any particular number, but rather will continually decrease as humanity proceeds into the future. If the carrying capacity of the Earth were to continually decrease, that would require both the human population and the per capita usage of resources to continually decrease. Refer to the work referred to previously of Chris Clugston www.wakeupamerika.com relating to the coming scarcity of resources needed for civilization to continue to function.

Technology has a massive fatal flaw that its proponents refuse to discuss or consider. Generally technology makes a product cheaper and, therefore, humanity uses more of the product, resulting in the same or even a greater usage of resources. For example—if presently an auto uses 1,000 pounds of steel and due to technology the amount of steel was reduced by 50% so that only 500 pounds were used, the price would decrease and humanity would buy two cars instead of one car resulting in the same total usage. In some cases humanity would buy three cars increasing the total usage. The same principle would apply when technology substitutes one resource for another—if limited resource “A” was used in a product, and if due to technology resource “B” was substituted at a cheaper price, the public would buy more of the product so that eventually resource “B” would be exhausted. If the price of electricity decreases due to technology, people use more electricity resulting in the usage of more oil and coal. History has shown what is set forth in this paragraph, is not just theoretical nonsense, but almost always happens. It is known as Jevons’ Paradox.

Let us look at a concrete example. Let us assume that instead of getting 20 miles to the gallon, efficiency increased that number to 40 miles per gallon. What could a person do? There are only two choices--1) double the number of miles driven, since it costs 50% less per mile or 2) drive the same number of miles and save the money caused by the reduction in cost per mile, say \$5,000.00. A combination of driving some additional miles and saving some money doesn't change this example. If you doubled the number of miles you drove, the car would wear out sooner, the roads would wear out sooner, the tires would wear out sooner, the wiper blades would wear out sooner, and replacing these items would require the use of additional resources. The automobile would require additional oil changes, increasing the waste the earth would have to absorb. More CO₂ would be put into the atmosphere, increasing the global warming problem. In simple terms, the increase in efficiency of miles driven would result in the increased usage of resources.

If you drove the same number of miles, you would save, in our example, \$5,000.00. You could do two things with that money--save it or spend it. (Again a combination of some saving and some spending does not change the example). If you spent the money and bought a shirt that would increase the usage of resources as someone would have to produce the fabric, build a factory, transport the shirt, open a store to sell you the shirt, and take other steps to make the shirt and sell it to you. If you saved the money and put it in the bank, the bank would eventually lend it out to someone who would use it to build a factory, use it to buy something, or take other actions to use resources. In other words, your savings would increase economic activity, and that would increase the

usage of resources. The only way the increase in miles per gallon would reduce the usage of resources would be for you to take the savings, \$5,000.00, and flush it down the toilet, and that will not happen. In almost every case an increase in efficiency results in an increase in resource usage, and not a decrease. For those of you who want more information regarding this phenomenon go to any search engine and look up the Jevons Paradox or the Jevons Effect or the Khazzoom-Brookes Postulate.

In some cases a more horrible situation will occur--- in the example above I used a savings of \$5,000.00. In some cases the savings due to an increase in efficiency would permit a couple to have an additional child and the ecological cost of the additional child would far exceed the ecological benefit of the increased efficiency. To put it in simple terms, increasing the efficiency by which humanity uses resources will not solve the problems facing humanity; more likely an increase in efficiency will lead to the earlier destruction of the human species.

Almost every problem faced by humanity today on a world-wide scale is in some manner caused by, or related to, the population explosion of the last 50 years. Perhaps an example will help explain the concept that technological solutions are a delusion. Assume the earth consists of a single acre. Since the one acre is finite and since the earth is finite, they are exactly the same for this example. No debate, discussion, sophistry or anything else can change the fact that for the purpose of this example they are exactly the same---they both are finite and any limitation that applies to the one acre also applies to the earth. Can the one acre grow one billion bushels of grain? Clearly the answer is no. If the answer were yes, the question would become could the one acre grow 100 billion bushels of grain? Clearly the amount of grain that could be grown on the one acre is limited no matter the technology applied. Nothing humanity can do can increase the amount of grain produced by that one acre above a certain point. Since the earth and the one acre are the same for the purpose of the example, it becomes clear that the resources that can be provided by the earth are limited, no matter the technology applied and no matter how efficiently the resources are used.

Can the one acre support one billion human beings? One hundred billion human beings? Since the answer to those two questions is clearly and unequivocally no, it is clear that the population of humanity on the earth cannot continue to grow forever, no matter how efficiently humankind uses the resources the earth can provide, and no matter the new technologies which humankind develops, and no matter how much of the earth's resources humankind is able to recycle.

Another example may be helpful for you to understand the relationship between new technologies and/or environmentalism (efficient use of resources) and the expanding human population. Assume that it takes 100 units of the earth's resources to produce one unit of economic output per capita. Assume further that there are 500 people alive. Based on those assumptions, it would take 50,000 (500×100) units of resources to provide one unit of economic output for each person alive. Now assume that due to new technologies and/or efficient use (environmentalism) of those resources it takes only 50 units (a reduction of 50%) of those resources to produce a unit of economic output for each person alive, but also assume that population increased to 1,500 people (population can become very large, but new technologies and environmentalism can only reduce the amount of resources used to produce a unit of economic output by a limited amount). Then based on those assumptions the earth would have to produce 75,000 ($1,500 \times 50$) units of resources so that each person could receive one unit of economic output. Those who rely on environmentalism and/or new technologies to solve the problems facing humanity are just plain wrong.

ENVIRONMENTALISM FAILS TO ADDRESS THE ROOT CAUSE

While every human being should be concerned about the environment and act in an environmentally friendly manner, that likewise is a major harmful delusion for essentially the same reasons that new technologies are a delusion. Population growth will always overpower the benefits of environmentalism—environmentalism can be only so efficient while population can grow very large. In addition, environmentalism only delays the problem, and when the problem must be solved there will be more people alive who cannot be permitted to reproduce. Everyone who acts in an environmentally friendly manner believes that he/she is accomplishing something, when in reality those actions are extremely harmful to humankind—they permit population to grow and humanity to use more of the earth's irreplaceable resources.

What long term benefit would there be to humankind if the average mileage per gallon of gas went from 20 to 30, but the number of auto and trucks increased by 400 million in China, India, and the rest of the third world because of an increase in their standard of living, and an additional 500 million cars and trucks were added due to an increase in population of the world from the present 6.7 billion to 9.4 billion? An increase in the number of cars and trucks of that magnitude, or greater, is realistic and probably will happen prior to 2050, if no major catastrophe intervenes.

Environmentalism, as that word is defined and used today, is an unrealistic delusion being imposed on humanity by people who have no

understanding of the world and no understanding of economics. Population reduction and environmentalism must go hand in hand, with the emphasis on population reduction, for environmentalism not to be harmful to the human species.

When the price of gasoline reaches \$30.00 per gallon due to the relationship of supply and demand, and the price of food substantially and dramatically increases due to the increase in the cost of oil causing a large portion of humanity to be unable to afford food causing starvation, no one will care about the environment and will demand that drilling for oil take place without regard for the environment. This will occur for all resources. To hell with the environment if I am starving to death or if I am going to lose my job and my family will starve to death!

Let there be no mistake, there will come a time in the very near future when there will be an unavoidable choice between the environment and starvation. Can you, the reader, present a logical argument that the price of gasoline will not reach \$30.00 per gallon when the human population reaches 20 billion or 30 billion or 40 billion and the number of cars and trucks reaches 5 billion or 10 billion? Population will attempt to reach the numbers I have set forth in this paragraph unless population growth is reduced to zero or below.

If human beings were to use their collective intelligence and reduce population by about 99.5% to about 35 million, then almost no matter how profligate, almost no matter how wasteful, and almost no matter how humanity treats the environment, humanity will survive for an extended period of time. Let there be no misunderstanding—environmentalism is good. However, in comparison to population and economic growth it is less than insignificant. All the time and effort spent on environmentalism should be spent on reducing population and economic growth to zero, or below, and should be spent on attacking and eliminating every aspect of society and religion which prevents a reduction in population growth.

HEATING THE PLANET AND THE COMING DEATHS OF BILLIONS

Let us examine the effect of greenhouse gases and global warming on humanity. While some experts contend that humanity is not the cause of global warming, or that global warming is not occurring, at least 80% of the experts believe that the production of greenhouse gases by humanity is the major cause of global warming. If the human population were to grow by 42%, as expected, between now and 2050, a per capita reduction in the production of greenhouse gases of about 30% would be required to maintain the current level of total world-wide production of greenhouse gases. To put it in simple terms, just to stay even and not increase the

total world-wide production of greenhouse gases, a per capita reduction of about 30% would be required.

With the expected increase in the standard of living of China, India, and the rest of the third world, the chance of a 30% decrease in the per capita production of greenhouse gases is almost non-existent. China expects to add a substantial number of coal fired power plants between now and 2050, perhaps as many as one a week. Other countries will need substantially more electricity, resulting in the building of more power plants, which will cause an increase in the amount of greenhouse gases put into the atmosphere. The expanded population will destroy large amounts of virgin forest resulting in an increase in greenhouse gases. The number of cars will increase between now and 2050 and no matter how efficient they are additional greenhouse gases will be put into the atmosphere. To support an increase of 42% in population, international trade and airplane traffic will increase by at least 42%, and that will put additional greenhouse gases into the air we all breathe. Extra energy will be needed to produce, package, transport, and cool the food humanity will need to survive, and that will cause an increase in greenhouse gases. More energy will be needed to heat and cool all of the additional homes, offices, and commercial establishments that will be constructed. The chance of reducing the total amount of greenhouse gases produced by humanity between now and 2050 is as close to zero as can be imagined.

According to the experts, in the frozen north of the Arctic, Siberia, and Alaska, there are hundreds of billions of tons of carbon that, if released, could be converted into methane. Also according to the experts there are substantial amounts of methane in the oceans that could be released if the temperature continues to increase. Methane is far superior to carbon dioxide in retaining heat. If hundreds of billions of tons of carbon and/or methane were to be released into the atmosphere, there would be a dramatic rise in the temperature of the earth. Carbon dioxide, the greenhouse gas now being produced by humanity, itself without methane will raise the temperature of the earth's atmosphere causing substantial problems for humanity. If substantial amounts of methane were produced together with carbon dioxide there is a great chance that the temperature rise would be dramatic.

No one can predict with 100% accuracy if the temperature of the earth's atmosphere will increase, and if it increases, how much it will increase by the years 2050 or 2100. Also no one can predict with 100% assurance that the level of the oceans will increase or by how much. However, the best predictions of the experts are that the level of the oceans will rise between three feet and 39 feet by the year 2100, due to an increase in the earth's temperature caused by greenhouse gases. Greenland's ice

sheets and the ice sheets of West Antarctica contain enough water, if melted, to raise the level of the oceans by those amounts. Both the ice sheets of Greenland and West Antarctica are melting today at an accelerated rate. One out of every ten inhabitants of the earth, or about 630 million human beings, reside in a coastal zone that would be flooded, if the level of the oceans were to increase by the levels set forth above. A rise to the levels set forth above is not needed to cause massive dislocations and destruction. A smaller ocean level rise, coupled with more powerful storms, will force massive emigration from low-level areas to higher levels of land. A smaller level of ocean rise coupled with powerful storms could cause most of the important coastal cities of the world to become ghost cities---New York, London, Tokyo. New Orleans, Los Angeles, Calcutta, and many others, could/would be doomed. Many islands would become uninhabitable and almost every river delta (now housing hundreds of millions of people) would become uninhabitable. Humanity would have extreme difficulty in coping with in excess of 600 million refugees and the destruction of many of the major cities of the world. No one knows with certainty how many people will be living in the year 2100 in the areas of the earth that could/would be flooded. However, most likely those areas will contain substantially more than the current 600 million. No comment is necessary.

Humanity cannot afford to gamble that greenhouse gases will increase in total between today and 2050 or 2100. Humanity must take steps to insure that those gases decrease and the only way that can be done is to reduce population, and to start the reduction today. Environmentalism cannot, and should not, be depended on to prevent an increase in greenhouse gases.

YOU CANNOT BET THE SURVIVAL OF HUMANITY ON THE POSSIBILITY THAT HUMANITY WILL DEVELOP ALTERNATIVE SOURCES OF ENERGY THAT WILL SUPPLY ALL THE NEEDS OF HUMANITY WITHOUT PRODUCING GREENHOUSE GASES.

What are the problems today which humanity faces in its fight for survival? The list is interminable--over population, environmental degradation, exhaustion of oil and other fossil fuels, global warming, rising food prices causing starvation and social unrest, the possibility of new and deadly plagues due to the destruction of forests and other natural habitats, destruction of species on a scale that could lead to the destruction of human life, lack of water to grow food due to the exhaustion of underground fossil aquifers, over fishing leading to the elimination of fish as a source of food for humanity, dead zones in the ocean due to fertilizer run off, the possibility of new and deadly plagues due to each human being living in close proximity with other human beings, excessive irrigation leading to the destruction of soils, overgrazing

leading to the destruction of soils, pollution in the atmosphere and rivers and oceans leading to disease, artificial chemicals leading to genetic damage, destruction of wetlands due to chemical pollution and the damming of rivers, invasion by non-local species leading to the destruction of local species, and, of course, the probability of war with weapons of mass destruction.

Some of the things listed overlap, but that should not detract from the problems facing humanity now in its struggle to exist. I am sure that you can think of more problems facing our species. Every one of those problems can be solved or greatly ameliorated by reducing the number of human beings existing on the earth. In fact, there is not a single problem facing humanity that cannot be solved or greatly ameliorated by a very substantial reduction in human population. To put it more directly, if humanity does not reduce its population rapidly today, one or more of those problems will lead to the destruction of humankind in the very near future. I challenge anyone to present a logical solution to any or all of the problems mentioned herein if population continues to grow beyond the 9.4 billion estimated by the US Census Bureau for 2050. Lastly, I challenge anyone to present a logical solution to any or all of those problems that will permit humanity to exist on this planet for 5,000 years if the population does not decrease below the present 6.7 billion human beings.

The words in this paragraph were taken from an article in a newspaper called "The Australian" dated January 16, 2008 by Allen Greer--- "Another problem with the application of technology [and/or environmentalism] to overcome limited natural resources is that even when it works, it is never permanent. The inexorable increase in human numbers ultimately over-takes it, leading to another scramble to find the next technological solution as quickly as possible. Take, for example, the technological solution to the problem of hunger. No sooner had the enhanced yields achieved by traditional selective breeding in the green revolution been made available to the hungry millions than we were told that we now urgently needed genetic engineering to help feed a new generation of hungry humans who continue to number in their millions. *You have to wonder if our food supply problems would not be less severe today if we had worked to stabilize or reduce human population at the same time as we made the green revolution.* Another problem is that each new advance makes it difficult to go back and retrieve earlier and simpler technologies that worked well. The technological path almost invariably starts with something simple, inexpensive, and diffusely owned; and progresses increasingly towards something that is complex, expensive, and narrowly owned. Each step reshapes jobs, professions, industries, laws, skills, and habits, all of which entrench the new technology. For example, each step along the path towards an agriculture based on

genetically modified plants and animals (all thoroughly patented) means that, increasingly, we are dependent on Agriculture International Inc for our food.” (Emphasis added.)

TRIAGE ETHICS----CONVENTIONAL MORALITY OR HUMAN SURVIVAL?

The explosive population growth and the explosive growth in the use of resources demand a complete reevaluation of every aspect of society. What was moral before 1950 could very well be immoral today and what was immoral prior to 1950 could be moral today. Morality is not engraved in stone. Morality is based on the needs of society and humanity at the time it is reevaluated. Prior to 1950 the concept of creating a two-group solution, the concept of dividing humanity into two groups, would have been not only immoral, but hateful and disgusting. Today such a division is necessary to prevent the immediate destruction of humanity and is, therefore, moral and just.

Medical science has by its advances changed every aspect of morality. Today medical science permits humanity to keep alive people who are in a vegetative state, people who are unable to control their bodily functions, people who have lost touch with reality, etc. Since the earth has only a limited amount of resources, humanity will have to make very hard decisions how to allocate those resources---does humanity keep alive to no one's benefit people who cannot function or does humanity use those resources for other purposes? Humanity must understand that every resource used to keep people who do not function alive is no longer available for other uses. Humanity must understand that almost every resource used today by humanity is non-renewable and will shortly be exhausted.

The decision as to how to allocate limited non-renewable resources is up to humanity. In order for population to remain stable, in order for population not to increase, there must be a one to one relationship between birth and death—a child cannot be born until and unless someone dies. If a child is born before a death happens, there will be an increase in population, and continually increasing population will destroy all of humanity. That means that until an old person who is unable to control his bodily functions and who is unable to relate to his surroundings dies, a new child cannot be born. By taking the position that all old people are to be kept alive, humanity is preventing a young healthy couple from having a new healthy child, unless humankind wants population to increase leading to the destruction of all of humanity. I will leave the definition of “cannot function” to another book.

Choices are tough, but they will have to be made! Today humanity is making very tough choices relating to the usage of resources. Today somebody or some group is determining who receives transplants of hearts and other organs. Today one or more humans are playing God and determining who lives and dies. Humankind has replaced God as the giver of life and death. Today life and death is determined by location and wealth----if you needed a heart transplant and lived in Botswana your chance of obtaining it is substantially less than if you lived in the US. If a premature baby needing modern medicine to stay alive is born in a Sub-Saharan country, his chance of receiving it is substantially less than if he were born in the US.

Humanity is making choices about who lives and dies today and those choices are not being made on a moral basis and will not be made on a moral basis in the future. There aren't enough medical resources to provide the best medical care for everyone on the planet, and there never will be. There never will be enough resources to keep every non-functioning person on the planet alive, and choices will have to be made about how to allocate resources. Triage medicine implies/requires triage ethics, whether they are acknowledged or not.

The idea that certain people can reproduce and other people cannot reproduce, or can reproduce with fewer children, is Darwinism/survival of the fittest/natural selection at its worst. However, humanity must face the fact that if it wants to survive Darwinism will be applicable to our species when the maximum supportable population is reached, and in my opinion it already has been reached. Everything that has been written attacking Darwinism as applied to humanity has been written with the implicit understanding that the maximum supportable population has not been reached. Everything that has been written attacking Darwinism as applied to humanity has been written with the understanding that the earth can support people who are not productive or that everyone can be educated to be productive, that the earth has excess resources which can be used to support people who do not have the skills to function and be productive in society, and that their existence will not result in wars of mass extermination.

Nothing has been written and no ideas have been presented attacking Darwinism, as applied to humanity, with the understanding that the maximum supportable population has been reached. If humanity must choose between Darwinism and the destruction of our species, the choice becomes clear. Darwinism wins! The only harm caused by Darwinism, as it should be applied to humanity, is to limit the number of children a person has, and in many cases that number will be zero. It does not cause any of the horrors set forth herein.

If on the other hand, the failure of society to embrace Darwinism results in one or more of the horrors that humanity will suffer, then Darwinism is the clear winner. Humanity has two choices once the maximum supportable population has been reached, and in my opinion it already has been reached, Darwinism or death and destruction of all or almost all of humankind.

Humanity has a very difficult problem---to establish a fair, equitable, just and moral method to determine who can and who cannot be permitted to reproduce and/or how many children a person can have.

As a student of World War II for over 50 years and having read over 350 books on the subject and having suffered personal tragedies because of Hitler's world-view, I am aware of the horrible possibilities of a two-group solution and Darwinism, as interpreted by Hitler and others. I am aware of the harm to humanity the two-group solution can bring. I am also aware of the problem of establishing criteria to determine who can procreate/breed/reproduce and how to control the entire process. However, I see a simple choice—control population or face destruction. There are no other choices. And the only way to control population is to divide humanity into two groups.

Any argument in support of voluntary birth control, regardless of how well supported by history, facts, or numeric projections of the reality, must first and foremost overcome every single pro-natal religious, cultural, political and personal belief and lifestyle choice of everyone affected. History has shown us without fail, that the human race, en-mass, is simply not sufficiently evolved socio-intellectually to the degree needed to accept and implement the changes required that would ultimately work in humanity's own, collective, long term benefit. Certain enlightened segments of society would agree and abide by rules and regulations necessary to achieve zero population growth, understanding that the required behavioral modifications and restrictions ultimately work to the benefit of all. However, a far larger percentage of humanity would continue behavioral deference to the historic, cultural, and religious pro-natal teachings intended to guarantee survivability of the race, culture, or religion, unencumbered by any concern for the universal collective good.

Any plan or program to achieve zero population growth must first deal with the most basic and ingrained of human impulses and urges, i.e....reproduction, survival of the species. Any reproduction limiting argument, irrespective of the supporting facts, could only be accepted or supported based on an intellectual understanding, belief in, and acceptance of, the "negative outcome scenario" side of said argument. Acceptance of, and agreement with, the founding tenants of the

argument in favor of the plan to reduce population growth is predicated on a populace having the intellectual acumen needed to understand the argument, coupled with a willingness to implement it. The history of humanity has repeatedly and clearly shown that human nature and behavioral impulses do not always manifest themselves in ways that engender an outcome that works in favor of an improved socioeconomic, living, or long-term survivability standard.

Witness the abysmal poverty and unimaginable living conditions in places like India or the Sudan. Millions of people are daily faced with conditions that are a direct result of overpopulation. It is all around them. They are clearly suffering and dying as a result. Yet, they do nothing about it. I believe the effect of the grinding poverty, disease, and infant mortality rate in these places has the exact opposite effect. It works to encourage more reproduction. It appears that the cognitive recognition of the very conditions that are killing them strengthen the impulse to reproduce and thus, perpetuate the species. The unintended consequence of such action, however, works to continue and strengthen the very negative scenario, and thus the cycle repeats. Witness to the death rate resultant of the burden strengthens the impulse to replenish. While they cannot ignore the fact that the burden of a population in excess of what can reasonably be supported has been exceeded, that reality cannot intellectually negate the fear of not reproducing and continuing the bloodline. Reproduction is a human (and animal) impulse. Population control is an intellectual concept. Any attempt to implement that control for the good of humanity and the planet requires universal acceptance of the concept on an intellectual level.

I firmly believe that human nature will over-ride any factually supported intellectual argument in support of any plan to control population growth, irrespective of the universally recognized negative outcome resultant of behavioral practices diametrically opposed to the core concepts of the plan.

THE EXHAUSTION OF OIL—A DEATH SENTENCE FOR BILLIONS

At this point I want to discuss the relationship between the exhaustion of oil and the future of humanity. First, I want to define “exhaustion of oil” for the purpose of these paragraphs. Exhaustion of oil can be defined in two ways—by price and thermodynamically. If it takes more energy to find, produce, refine, and distribute a gallon of oil than the energy it produces at the location where it is used, the supply of oil is exhausted even though there may be oil in the ground. For example, if it takes 10,000 units of energy to find, etc. a gallon of oil and the gallon of oil only produces 1,000 units of energy when it is used, then the supply of oil is exhausted. Under those circumstances it would be illogical to find,

etc., oil, as every gallon used would result in a loss of energy. I will also define oil as exhausted when the price of food rises resulting from an increase in the price of oil, such that 25% of humanity cannot afford food, resulting in massive starvation. In this case as well, there may be oil in the ground, but it is useless to 25% of humanity.

I will define the exhaustion of all fossil fuels similarly—thermodynamically and when other fossil fuels replace oil, to the extent that they can replace oil, but the increased price of food is such that 25% of humanity cannot afford food, resulting in massive starvation.

Since the amount of oil, including oil made from oil shale and oil sands, on the planet is finite, it will be exhausted. Once a gallon of oil is used, no matter how it is used, it is lost and gone forever. It can never be recaptured and used again. Two questions then must be answered---when will oil be exhausted, and when it is exhausted can anything or any group of things replace oil in all its uses by humanity? There is a method/process, the Fischer/Tropsch process, by which other forms of fossil fuels can be converted into usable oil. The Germans used that process in World War II to make fuel for their airplanes and tanks. However, at this time it is clear that this process will not produce a sufficient amount of oil that would be necessary for humanity to function and, therefore, I will not discuss it. Also when all fossil fuels are exhausted, the process would be useless. As with oil, fossil fuels are finite and not infinite and, therefore, will be exhausted. When any fossil fuel is used it is lost and gone forever. It cannot be reused.

What are the alternative sources of energy humankind can use to replace fossil fuels? There are three alternative sources of energy---a) the sun including wind, the tides, flowing water (rivers and dams), biomass, the heat difference between warm and cooler water, and photo-voltaic; b) nuclear including fission and fusion; and c) geothermal/volcanic. None of the sources produce the equivalent of oil, except for biomass—they only produce electricity. And electricity is very hard and inefficient to store.

None of those sources produce a liquid fuel that can replace oil except for biomass conversion, and that process is highly inefficient, as the USA is learning in converting corn to fuel. More importantly, ever acre of land used to produce biomass is no longer available to produce food for the ever-growing population. None of these sources produce the complex chemical molecules which oil provides to humanity and which humanity uses in many areas.

While no one can guarantee the future, it is highly unlikely that without oil, humanity will be able to produce the fertilizers, plastics and pesticides in the amounts necessary for our civilization to continue to

support 7 billion or more of us. Except for the burning of biomass, almost all the energy that the sun produces is intermittent, and that fact makes it very difficult to use—no sun, no energy. In many cases even if there is sun, the energy is intermittent—tides change, river flow changes, winds are not steady, etc. In almost every case in which the sun's energy has been used, back-up sources of energy are required and those back-up sources require fossil fuels.

Since geothermal/volcanic sources are far from the places where energy is needed, except for Iceland, no significant use has ever been made of those sources. No expert predicts that geothermal and/or volcanic will ever provide more than a very insignificant amount of the energy needs of humanity. Nuclear can and does provide significant amounts of alternative energy to humanity. However, there are a number of significant problems with nuclear which make it highly unlikely that nuclear will ever totally replace oil and other fossil fuels. Among the problems are waste disposal of radioactive material, security concerns, limited amount of nuclear fuel, the risk of catastrophes similar to the one in Chernobyl and the recent one in Japan (2011), and the cost of construction of nuclear power plants. Neither energy from the sun nor nuclear nor geothermal/volcanic sources produce the complex molecules needed by humanity for plastics, pesticides, and the numerous other products essential for the survival of our civilization and the survival of humanity as we know it.

While most people talk of electrical energy, electricity is not a source of energy. You need energy---a coal or oil or nuclear power plant or a dam, etc., to produce what most people call electricity or electrical energy. Electricity is merely a means to transfer energy from one place to another place. And it takes energy to transfer electricity from one point to another point—if a dam or power plant produces electricity at one point and the electricity is used at a plant that produces cars 100 away miles you have less usable energy at the car plant than was produced at the power plant.

You need energy to obtain hydrogen in a form in which it can be burned. Hydrogen also is merely a means to transfer energy from one point to another point. For example, a dam generates energy which is used to separate water into hydrogen and oxygen—the hydrogen is placed into a cylinder which can be transferred from one point to a second point where it can be burned to produce energy that is useful for humankind. The energy you get from burning the hydrogen in the cylinder at the second point is less than the energy used to produce the hydrogen at the first point. The laws of physics require that result.

World energy consumption grew by 11 per cent between 1989 and 1999. According to the research of British Petroleum (BP), the demand for energy will increase by an additional 60% by 2030 and double by 2050. And it will not stop growing in 2050. The most important concept to understand is that so long as the human population continues to grow, the demand for energy will grow. While humanity can reduce the amount of energy used for a unit of economic output, that reduction will always be offset by an increase in population. To put it in simple terms--- population increase will always increase the demand for energy faster than efficiency or new technologies can reduce the demand for energy. If by efficiency, humanity were to use only 70% of the present energy used to produce a unit of economic output, but population were to double, the total demand for energy would increase.

When will the supply of oil be exhausted such that it can no longer be used effectively by humanity? While no one can predict the date of exhaustion with 100% certainty, any prediction must take into account the exploding demand for oil by China, India, and the rest of the nations of the world due to the increasing standard of living and the rapidly growing population of humanity. For the first three months of the year 2009, China purchased more new cars than did the USA. With China's huge population and with its surging economy, it is almost certain that China will continue to buy more new cars than the USA or any other nation on the planet. That gives you some idea of the rapidly increasing standard of living of the Chinese people. It is estimated that China will require more oil by the year 2030 than the entire world's production of oil in the year 2009, due to its expanding economy and its exploding car ownership. The year 2030 is about 20 years into the future.

The best estimates of which I am aware predict that the supply of oil, including oil made from shale or oil sands, will be exhausted in less than 150 years, and the supply of coal and all other fossil fuels will be exhausted in less than 250 years. Professor David Rutledge of the California Institute of Technology recently made a compelling case for the peak of all fossil fuel energy production occurring in 2021 and for 90% of all the fossil fuels that humanity will ever extract being consumed by 2076, and 2076 is a very short time in the future—in the lifetimes of my grandchildren. To put his position in slightly different words, he has written that the supply of energy provided to humanity by all fossil fuels will start to decrease after 2021, requiring humanity to obtain and use other sources of energy after that date to offset the decline in energy produced by all fossil fuels. He has also written that 90% of all the energy that will ever be provided to humanity by all fossil fuels—oil, coal, natural gas, etc.—will be used up by 2076 and only 10% of that energy will be available for future use by humanity after 2076.

To be on the conservative side, assume that Professor Rutledge is wrong by about 74 years---that humanity will have used 90% of all fossil fuel energy it will ever use by 2150 ($2076 + 74 = 2150$). For the purpose of the survival of humanity, it makes no difference if our species uses 90% by 2076 or 2150, or even the year 2200. Humanity must plan today to run its civilization without fossil fuels, or with a very limited amount of fossil fuel. Of course, the numbers and times set forth above are nothing more than estimates. However, humanity must base its future actions on the best scientific information presently available. If humanity does not have any fossil fuel or only a limited amount of fossil fuel available to it, the human population must substantially decline.

Let us look at oil usage in another way. According to the US Government, demand for oil on a world-wide basis increased from 46.808 million barrels per day (bpd) in 1970 to 85.542 million bpd in 2007, an increase of 38.734 million bpd or an annual average increase of 1.046 million bpd over 37 years. This represents an increase of 82.7% in just 37 years. If the same rate of increase were to continue for 43 years from 2007 to 2050, the world would use 130.520 million bpd in 2050. For the period 2007 to 2050 the world would use almost 1.7 trillion barrels of oil. Of course, no one knows if the rate of increase in oil usage will remain the same in the future. However, since there will be explosive economic growth in China and India, a strong argument can be made that the increase in the usage of oil will be far in excess of the previous annual increase in the future. If oil usage did not increase, but remained at the 2007 level of 85.542 million barrels per day, for the period 2007 to 2100, humanity would use almost three trillion barrels of oil. If oil usage averaged 100 million bpd (an extremely low average) for the period 2007 to 2100 humanity would use a total of almost 3.4 trillion barrels of oil. And according to the experts, the earth only has 3.0 trillion barrels of recoverable oil!

The estimates I used in the previous paragraph are supported by the estimates of the International Energy Agency of Paris, which predicts the demand for oil will increase to 116 million bpd by 2030. In the 70 years from 2030 to 2100 at that rate of usage a total of 2.964 trillion barrels of oil would be used. That usage does not take into account the usage from 2008 to 2030 and any increase in usage subsequent to 2030. It would be the height of folly for humanity to assume that oil will last beyond the year 2100.

At this point a short discussion of "peak oil" is appropriate as it is in the news quite often. An oil well after it is discovered and developed starts to produce oil at a certain daily rate. The daily rate increases until it reaches a peak, and then starts to decrease. The physics that apply to one oil well, apply to all of the planet's oil wells in total. To use different

words, at some point in time the total oil production of the planet on a daily basis will reach a peak and start to decline. That peak is called "peak oil". While there can be some dispute as to if the world's production of oil has peaked or when it will peak in the future, there cannot be any dispute that oil per capita has already peaked. In other words, the daily production of oil per human being alive has reached a peak about four years ago and has already started to decline. This fact is extremely important and has not generally been discussed in the media.

The decrease of oil per human being will continue to decline for two reasons--1) the increasing human population and 2) the fact that oil is finite and the amount of oil per day which the world can produce has already reached the peak oil or will reach a peak in the near future. This fact cannot be debated and any discussion for consideration of the future of the human species must take this fact into account.

The concept of "peak" applies not only to oil, it applies to all fossil fuels and to all nonrenewable resources used by humanity-- there is or will be peak iron ore, peak tin, peak zinc, peak antimony etc.

While there may be many causes of the increasing price of oil, there cannot be any doubt that increasing demand is one of the major, if not the major, cause of price increases. During the time I have written this book, the price of a barrel of oil has fluctuated between about \$35.00 and to in excess of \$140.00 a barrel. The demand for oil will continue to increase---China, India, and the rest of the third world will have an additional 300-600 million cars and trucks in the near future; more cars and trucks in the USA; the population of the entire world is estimated to reach 9.4 billion in 2050—more cars and trucks. More, more and more—more houses to heat, more airplanes will fly, more international trade, more food to produce, more food to transport, more electricity to produce! The demand for oil and other fossil fuels is insatiable and will continue to be insatiable. Nothing will stop the increase in the price of oil and other fossil fuels. The only question is-- how high?

Environmentalism and new technologies will not solve the problem of the increase in demand and the increase in the price of oil. It would be the height of folly for humanity to bet its survival on new technologies and/or environmentalism to reduce the demand for oil and other fossil fuels. As the price of oil increases, the price of food and other items needed by humanity will increase, and a very large portion of humanity will not be able to pay the price. Remember that a large portion of humanity (best estimate about 2 billion) today survive on less than one or two dollars a day. Social unrest, resource wars, collapse of the social order and revolution and war must occur when 20%, 30% or 40% of the population of the world is starving to death because they cannot afford

food or the other items needed to survive. A more horrible scenario—as humanity fiddles with environmentalism, fiddles with possible new technologies, and fiddles with alternatives to oil, the population of the planet continues to grow at over 200,000 human beings every day---about 77 million per year.

It must be noted and understood that many countries subsidize the cost of oil so that the toiling masses can afford the oil they need to survive. Not if, but when those countries no longer are able to subsidize the cost of oil, social unrest and the collapse the social order is sure to follow. A few rhetorical questions! What price of a gallon of gas in the USA would cause riots in the streets---\$5.00 per gallon, \$10.00 per gallon, \$50.00 per gallon? Can the citizens of the USA be sure that the price that will cause riots in the streets of the USA will never be reached in their lifetimes, in the lifetimes of their children, in the lifetimes of their grandchildren, never?

As with all resources, humanity has already used the easiest oil to obtain. In the future, humanity will have to spend more effort, time, money, manpower, and will have to develop new technologies to obtain the oil that remains on the planet. And those efforts will increase the price of oil and the price of all resources.

Those readers who stay aware of current events will ask—what about natural gas from the Marcellus Shale geological formation that exists under the earth in the Eastern United States? The Marcellus Shale geological formation is about 54,000 square miles of shale under various states from New York to Kentucky and west to Ohio. Numerous companies are drilling into the shale and extracting natural gas that is expected to provide natural gas energy for decades. However, energy for decades will not provide a long-term solution for humankind and will not supply the energy needed for the ever-growing population. The natural gas from that formation is also finite and will be exhausted in a relatively short period of time. Depending on which estimate you believe, the US population is expected to increase from the current 306 million to 430-450 million by 2050. And the natural gas from the shale geological formation will not supply the energy needs of the rest of humanity. Lastly, the technology presently used to obtain the natural gas referred to in this paragraph can be extremely harmful to the environment. Also, natural gas cannot be substituted for oil in all its uses.

Without oil the airline industry will collapse. No other source of energy can consistently and over a lengthy period of time provide the combination of power and weight which is necessary for the airline industry to function. A short while ago one plane flew with fuel made from a combination of regular oil and from oil made from biomass.

However, that was just a stunt and does not represent the future of the airline industry. It is important to note that every acre of biomass converted to fuel is an acre that no longer produces food for humanity, and every day population is growing by about 200,000. No airline industry, no tourism industry. No tourism industry, therefore massive unemployment in every part of the world as that industry collapses. No airline industry, no air freight/cargo industry, which will dramatically affect every industry in the world that depends on air freight/cargo.

While the water transportation industry and the cruise industry can switch to other sources of power, all of those other sources have problems that probably do not permit their use for any length of time. Coal could be used to power ocean freighters. However, if all freighters were converted to coal, it would be an ecological disaster for all of humanity. Coal probably could not be used for river freighters. Coal probably could not be used to power ocean-going fishing vessels. The cruise industry probably could not prosper with coal-fired ships. And what happens when coal and all other fossil fuels are exhausted?

Powering ocean-going vessels by hydrogen would probably be too dangerous and probably could not be done. Also, as indicated above, power is needed to obtain hydrogen, and without fossil fuel it would be difficult to attain a sufficient amount of hydrogen that would be necessary to power the large number of ocean-going vessels involved in international trade. A few ocean-going vessels could be powered by nuclear reactors, but it is highly unlikely that a sufficient number of ocean-going vessels could be nuclear powered to maintain any reasonable level of international trade. It is highly unlikely that electric batteries could be made light enough and powerful enough to power ocean-going vessels. While sailing ships and ships powered by photovoltaic cells could be used, they would not be able to handle even a small fraction of the present international trade. It would appear that when the oil supply is exhausted, international ocean trade would be dramatically reduced, and the consequences of that fact would have a very, very substantial affect on humankind.

Most importantly, substantial amounts of food and other raw materials (resources) would not be shipped from those countries that had excess amounts, if any countries had excess, to those countries in need of food and other resources. Also, those countries that manufactured goods would/could not ship those goods to countries in need of them. In effect, each country and/or each continent would have to become completely self-sufficient. More than having a substantial affect on humanity, a substantial reduction in international trade would probably destroy civilization as we know it. Society would collapse and collapse catastrophically in those countries that needed to import food to avoid

massive starvation, but could not obtain the food they needed due to the fact that international trade was substantially reduced.

A dramatic decrease in international trade would have a dramatic effect on the United States. Most people do not realize that the United States imports a substantial portion of the resources it uses to maintain our civilization. Go to www.wakeupamerika.com (it is spelled with a "k" and not a "c") and read the detailed research of Chris Clugston, which explores in detail the amount of resources used and imported by the United States. His research makes it absolutely clear that if international trade were substantially decreased, the civilization of the United States as it now exists will collapse almost instantaneously. In fact, his research covering almost 90 minerals shows that the world as a whole is presently using those minerals in a manner that cannot be sustained for any reasonable length of time. See Exhibit 6 for a one-page summary of US resource imports.

Trains could be propelled by either coal or electric. However, trains do not reach every village, town and hamlet. Therefore, trains are not the solution. If all trains were powered by coal, the environmental effects would be harmful for all of humanity. Again what would happen when coal and all other fossil fuels are exhausted? Electric and/or hydrogen powered cars could be used for the people. The question becomes—could electric and/or hydrogen power trucks haul heavy goods to and from the train stations to places where the goods were needed and used? Could enough electricity be produced for the needs of humanity over the entire world? Could humanity create the necessary infrastructure to make and distribute hydrogen throughout the entire world in time to permit hydrogen to replace oil in cars? How would the lack of oil affect the production and distribution of food? Farm tractors demand a great deal of power. Irrigation pumps demand a great deal of power. Could those items be powered by electric batteries? Could a sufficient amount of electric be brought to the farms? Could those items be powered by hydrogen? It takes energy to obtain hydrogen from water or other sources. All of these problems, and other problems too numerous to count, would have to be solved on a world-wide basis. And most importantly, oil has many ancillary uses—pesticides, fertilizers, and other chemicals. Could coal or other hydrocarbons provide the necessary raw materials to replace those other items made from, or partially made from, oil? And what would happen when coal and the other hydrocarbons were exhausted? To sum up this paragraph, the exhaustion of oil would be a catastrophe which humanity would find very hard to survive, if it could survive at all.

Let us look at the fossil fuel problem another way. Since there cannot be any dispute that eventually humanity will exhaust the supply of fossil

fuels (the amount of fossil fuels is finite), what would be in the best interest of humankind—face the problem today, face the problem some time in the future when the population of humanity is much larger, or bet the survival of humanity that science will develop things in the future that will replace fossil fuels?

The answer is very simple, make population growth negative—immediately start to reduce population. Anyone who disagrees with what is written in this paragraph must assume either those fossil fuels are infinite (that humanity will never run out of fossil fuels), or that before humanity exhausts the supply of fossil fuels humanity will find alternative energy sources that do not require a substantial reduction in the human population. Since no rational person can believe that the supply of fossil fuels is infinite, a rational person who disagrees with what is written in this paragraph must take the position then that the genius of our species will find alternative energy sources that can be substituted for fossil fuels, such that a dramatic decrease in population would not be necessary. The substitute resource or resources must be able to replace fossil fuels in every area in which humanity uses fossil fuels, not merely in the area of energy usage. Any person who disagrees with what is written in this paragraph is betting the lives of billions of people that humanity will find alternative energy sources and other resources that can replace all of the uses of fossil fuels before they are exhausted.

I do not believe any person can present a convincing case that when the supply of fossil fuels is exhausted (and it must be exhausted some time in the future, since it is finite), and if alternative energy sources and other resources are not found, that there will not be a dramatic, precipitous, and violent decline in human population. To bet what is essentially the survival of humankind that humanity will find alternative sources of energy and other resources that could replace fossil fuels in the very near future is an irrational bet.

Let me see if I can put the entire fossil fuels problem into perspective. If India and China (forget about the rest of humanity) used oil on the same per capita basis as the USA, the demand for oil would exceed 200 million bpd. The production of oil at that level is not only impossible, it is inconceivable. And not only is it inconceivable, it would exhaust the supply of oil in a very, very, short period of time. Throw in the demand for oil made by the rest of humanity and the demand for oil would reach—who knows. Americans must understand that the rest of humanity has the same per capita right to oil usage as the citizens of the USA. Not only must Americans realize that fact, but also every person living in every industrialized country must realize that people of China and India will demand and get the right to use oil at the same per capita

level. Americans must be prepared to immediately reduce their standard of living, or face the deaths of their children, grandchildren and great grandchildren. Americans must work with the rest of humanity to immediately reduce population, and reduce population by artificial birth control and abortion.

In summary, humanity will very shortly exhaust the supply of oil and will have to find one or more substitutes for the energy, chemicals, and other necessities provided by oil. The substitutes will have to have no destructive affects on the environment and be able to last a minimum of 5,000 years. (Remember that the dinosaurs ruled the earth for about 160 million years and that 5,000 years compared to 160 million years is an extremely short period of time.) If humanity were to exhaust the supply of oil by 2100, and if humanity did not have substitutes in place that could replace oil in all its uses, our modern civilization would collapse, and, in my opinion, collapse in a ball of very destructive fire.

You must ask yourself two questions---what are the chances of humanity exhausting the supply of oil by 2100; and if the supply of oil is exhausted, what are the chances that humanity will have substitutes for oil, in all its uses, available in sufficient quantities and at prices which will prevent the destruction of our species and our civilization? Consider the fact that the answer to those two questions will determine if your great grandchildren die horrible deaths in 2100.

CARS & TRUCKS---MORE CARS & TRUCKS

According to Ward's Auto, the global number of cars operating on the planet exceeded one billion fifteen million (1,015,000,000) in 2010, an increase of about 35 million from the previous year. China had the highest percentage increase--27.5%. According to the best estimate I could obtain, there were in excess of 220 million trucks on the road in 2010. Of course, both of these numbers were growing every year, and, of course, as the numbers grew each year, additional oil would be needed to power the vehicles. A few questions to be considered which I cannot answer, nor can the "experts" answer---when humanity runs out of oil, how long will it take to replace the huge number of vehicles then operating, what will it cost, will humanity have the resources necessary, how long will it take to provide the infrastructure for the new types of vehicles, will humanity have the necessary resources for the new infrastructure, when should planning begin for the replacement, what will be the power source for the new types of vehicles, how should the new types be allocated among the nations and among the individuals? You should get the idea of the problems that will have to be solved in the very near future.

THE MORALS OF DIVIDING HUMANITY INTO TWO GROUPS---THOSE WHO ARE PERMITTED TO REPRODUCE, AND THOSE WHO ARE NOT PERMITTED TO REPRODUCE

The most difficult problem facing humanity is to establish a fair, just, moral and equitable method to determine those who will be permitted to reproduce, and those who will not be permitted to reproduce. Without exception, everyone is disgusted by the concept of dividing humanity into two groups. However, that cannot be helped. The problem must be faced, and faced now, by all of humanity, if we are to survive as a species.

Every species or sub-species that ever existed on this planet had to have its gene pool modified to conform to the demands of the environment in which the species existed, or the species did not survive. Example---assume that the predators ran at an average speed of eight miles per hour, and the prey ran at the same speed. Under those circumstances there would be a balance between predator and prey. Now assume that due to evolution the prey ran at an average speed of twelve miles per hour. If the gene pool of the predators did not change so that they ran at twelve miles per hour, the predators would cease to exist after a few generations—they could not catch the prey. Another example—assume a plant species needed two inches of rain to survive. If there were a change in the rainfall pattern such that only one inch of rain fell, the species would cease to exist after a few generations, unless the gene pool changed such that the species could survive on one inch of rain.

Everyone must understand the simple fact that the environment controls the genes of every species, and that includes the human species. The gene pool changes as the environment changes and no moral precept of humanity will change that fact. The failure of humanity to understand and act upon that fact will lead to the destruction of humanity. Even though the human species has intelligence, the same fate awaits it unless it adapts.

I am genetically handicapped. If I had to compete with an African Bushman in a survival contest in the Kalahari Desert in Africa, my genes would not let me compete. No amount of education and training could overcome the fact that I would be unable to survive in the Kalahari Desert. If survival required me to run a four minute mile, broad jump twenty feet, and pole vault fifteen feet, I could never perform those functions, no matter the education or training I received. It is the height of arrogance to believe that everyone will have the genetic skills or could be trained or educated to have the skills necessary to survive into the future.

Even if humanity reduces its population growth to zero and it remains at zero, only those genetically able to perform the functions demanded by society will survive and reproduce. That has been the case for every species that ever existed, and will be the case for humankind. Those who will survive to reproduce will be determined by the intelligence of humanity or by violence. It is that simple. And the struggle for survival will become more and more violent the closer humanity comes to exceeding the carrying capacity of the earth.

If the earth can support 100 people and there are only 50 people on the earth, those who do not have the necessary skills to function could be supported by those who have the skills to function. Morality and justice require that those who are able support those who are not able. However, if the resources of the earth can support 100 people and there are 100 people on the earth, then those who are able to function will not permit those who are unable to function to reproduce, and no sense of morality and justice will change that outcome. This determination will be made either by the intelligence of humanity or by war, death and destruction. Without a single exception, since life started on this planet, when the maximum number of individuals that the niche could support was reached, a struggle for survival ensued, and that will be the case for humanity—to hell with the concepts of morality and justice.

Many people have argued that society will need the less able to perform menial tasks that the elite will not perform, but that are needed for society to function. Of course, that is true. However, the definition of the less able will be determined in relation to the needs of society, the population, and the description of the elite. A simple example--- in the future, to clean toilets a person may need a college degree, and to get a good job a person may need two college degrees, and anyone without a college degree would never get a job. Under that example a person with only one college degree will either clean toilets or starve to death, and the person without a college degree will always starve to death. In this example by using a college degree, it is not my intention to claim that a college degree will be the deciding factor—it is just an example.

The problem for humanity is that we, collectively, may be unable to determine the necessary skills so that we can determine who reproduces and who does not. Humanity may be unable to determine which skills are genetic and which skills are the results of the environment, or of prejudice. No other species that ever existed needed to make that determination; it was always made by nature and made by nature in a violent and deadly manner. With the availability of weapons of mass destruction, we cannot let that determination be made by nature. We must try to establish a value-neutral, just, and equitable method of

determining who reproduces. The alternative is death on a scale which humanity cannot even imagine.

Alfred North Whitehead, the famous mathematician and philosopher, wrote in 1916 ---“In the conditions of modern life, the rule is absolute: the race which does not value trained intelligence is doomed. Not all your heroism, not all your social charm, not all your wit, not all your victories on land or sea, can move back the finger of fate. Today we maintain ourselves. Tomorrow science will have moved forward yet one more step, and there will be no appeal from the judgment which will be pronounced on the uneducated.” What does that quotation have to do with the exploding population?

Whitehead understood and made clear that there will be two groups—those who were intelligent and educated, and those who were not educated. While we can debate who will be the reproducers and what qualities the reproducers will have, we can be certain that to be a member of the reproducers will require a minimum level of intelligence and a minimum level of education. And to be very blunt, those individuals who live in countries with exploding populations and inadequate resources to provide educational opportunities will find it extremely hard to become members of the reproducers. That may not be moral, but that is a fact which all of humanity must understand. As much as humanity may try, the division of humankind into two groups cannot and will not be 100% moral.

A moralist will argue that humanity will, by the means of charity and other methods, take care of the less able. Up to a point that is true. However, when the choice is between survival and charity, survival wins, and when the maximum population is reached any charity will reduce the chance of survival. Portions of families have been on welfare, non-productive citizens, for three or four generations. Arguments can and have been made that this is the result of environmental factors and prejudice and not as the result of a genetic inability to function. Arguments can and have been made that this is the result of factors beyond the control of those on welfare for generations. All of humanity will never agree on the resolution of those arguments. However, no matter the reason—genetics or environment and/or prejudice—in the future those who have been unable to contribute or function in society for generations, will be eliminated from the population. How they will be eliminated is the question—by violence or by the intelligence of humankind.

Those who would argue that humanity does not have to be divided into two groups are implying that evolution does not apply to the human species. If humankind is subject to evolution (and humanity is subject to

evolution), then the human species must be divided into two groups. The only way an intelligent argument can be made that every human being has the right to reproduce is to state explicitly and directly that our species is the ultimate living species and humankind will never evolve, never change, no matter the circumstances or needs of our species. The fact that humankind has intelligence does not change the fact that humanity is subject to evolution and will change no matter how immoral that concept is, and no matter how disgusting and hateful most people see that position. As indicated above, every species in every generation, in every environmental niche, has been divided into two groups when the maximum number of individuals that could be supported by the niche has been reached.

Humanity is not and will not be an exception. Humankind's population will continue to grow until the maximum number of individuals that can be supported by the planet has been reached, if it has not already been reached. The determination of those who survive is a continuous process, as the environment and the needs of society change, so do the skills of those who will survive change. It is not and cannot be a direct linear process.

Every species that did not evolve according to the needs of the environment in which it lived became extinct. If humankind does not evolve it will become extinct. No concept of human morality will change that fact-- evolve or become extinct, and evolution requires humanity to be divided into two groups, the reproducers and the non-reproducers.

If left to chance, those who survive may not be the best for humanity as a whole. Examples—if left to chance, those who survive could be those who are prepared to kill anyone who opposes them; if left to chance those who survive could be the religious fanatics who produce the most children and spread like a cancer over the face of the earth.

Assume that the human population of the world stabilizes at one billion. Assume further that 800 million have the skills to function in the society at it exists at that time, and that 200 million do not have the skills to function. Those are reasonable assumptions because in every population in every niche there was a portion of the individuals that did not have the necessary skills to survive in the environment occupied by the species. Under those assumptions, the 200 million who did not have the necessary skills would be parasites on the 800 million that had the necessary skills. A situation in which a large, or even a small, percentage of the people are parasites is not stable and will not exist for any length of time. Either the underclass (those without the skills) will revolt, become terrorists and use weapons of mass destruction because they have nothing to lose, or those who have the skills will kill off the

underclass because they are parasites. I have used the word “parasites” because those without the necessary skills would use resources without producing anything. Charity could permit this unstable situation to exist for a period of time. However, this unstable situation would not exist for a lengthy period of time.

Let us examine the problem in a different way. I never have read or seen anything that sets forth cogent/valid reasons why Darwinism does not apply to the human species. Anyone who disagrees with what I have written so far should /must set forth cogent/valid reasons why Darwinism never applied to humanity, does not apply to humanity today, or will never apply to humanity in the future. Anyone who opposes what I have written must either assume that both population and economic growth can continue forever on the finite earth, or set forth a very valid argument that Darwinism will never apply to humanity when both population and economic growth stop or become negative.

Humanity will have to understand that as society changes, and society does change and will continue to change, the skills necessary to become part of the reproducers will change. At any particular time no one will know what those skills are. To establish a method when the demands of society change to require those who are part of the reproducers to give up their privileged positions, will be a very difficult problem. Also, because a person has the necessary skills does not mean that person’s child or children will have the necessary skills. That means that the laws of inheritance will have to be changed so that each person competes on his or her own ability and not because he or she inherited money or other assets from his/her parents or from others.

Inherent in the assumption that population growth will voluntarily be reduced to zero, or made negative, is the additional assumption that everyone will have the right to reproduce without regard to the ability of that person to function in society. Those two assumptions require that evolution stop with humanity, that humankind is not subject to evolution, and that the gene pool of humankind will never change, no matter the environment in which the human species exists. Since life began on the earth, the environment controlled the genetic development of every species, without a single exception. To take the position that because humanity has some degree of intelligence, our species is not subject to evolution and that the gene pool of humankind will not change, is just plain wrong. Even with a stable population, only some people can be permitted to reproduce.

Anyone who opposes what is written in this book has two major intellectual and logical problems to overcome. First, that person must take the position that the earth can support an infinitely large population

and infinitely growing economy. If he does not take that position, he is agreeing with me that growth must cease—all we are doing is debating when it must cease. There are only two choices—growth will cease at some point in time or it will go on forever. There aren't any other choices. Second, once we agree that both population and economic growth must cease, he must describe the manner of cessation other than the one I proposed. He must show how both population and economic growth will cease without the division of humanity into two groups ---he must show that both economic and population growth will voluntarily be reduced to zero---he must show that both population and economic growth will voluntarily remain at zero for as long as humanity exists on the earth—he must show that every group, nation, religion, etc. will voluntarily maintain the delicate balance necessary to prevent a runaway population explosion.

Implicit in what I have written is the assumption that having a child is not a private act. Rather, it is the most public act that can be imagined. Since all of humanity resides on the one earth and shares all of the resources of the one earth, a child born anywhere on the earth competes for resources with any other child born on the earth. We can debate the amount of resources used by a child born in the USA versus the amount of resources used by a child born in a poor third world country, but that does not change the fact that both children are competing for the same resources.

Since pollution does not know any artificial country boundaries, a child born anywhere causes pollution around the entire planet. Because you are a devout Catholic, Jew, or a devout anything else, does not give you the right to kill me and/or my progeny, and that is what you are doing when you reproduce by having in excess of one or two children—one child if I have convinced you that population must be reduced below the current 6.7 billion, or two children if I have convinced you that population cannot be permitted to grow. Unless humankind understands and acts upon the fact that having a child is the most public act, we are all doomed. Since giving birth to a child is the most public act possible, society must have the right to control that act. The decision to have a child cannot be made solely by the male and female involved. Let me put the idea into simple words---anyone fathering or giving birth to a second or third child is condemning everyone else on the planet to a horrible death, and must be considered a mass murderer.

NO HUMAN RIGHT IS ABSOLUTE

No human right has ever been absolute and no human right will ever be absolute in the future. All human rights are subject to the effect they have on other human beings. If by having a second or third child I am

causing the deaths of billions of human beings, my right to have that child is not absolute and must be restricted and restrained. I challenge anyone to present a logical and factual case that the right to determine the number of children a person has is an absolute right and may be exercised by the individual when that right tends to kill and destroy other human beings. Even the right to life is not absolute. Society may take away my life if I am convicted of murdering someone else. Society has the duty, not merely the right, to restrict the number of children a person has if the act of giving birth is extremely destructive to the rest of humanity.

For those of you who object to a two-group solution and are disgusted by the concept, I will set forth an example. How would society function in any city in the world if 80% of the people in that city could not use a flush toilet because they did not have the skills to understand how to operate that device and could not be trained or educated to operate it? Based on their inability to operate a flush toilet, they used the streets, parks, and boulevards to perform their bodily functions. Society would not allow this to continue to happen, restrictions would be imposed. Admittedly a ridiculous example! However, something similar could and will happen in the future as society will become more complex and not everyone will have the genetic skills and could not be trained to function in that society.

TEXAS IS NOT THE SOLUTION

A number of those who believe that the earth can support substantially more people than presently live on our planet point out that the entire world's population could reside in the state of Texas at a density that would be less than the density of New York City. The density of the location of the population is unimportant and really meaningless. The important determination to be made is the relationship between the population and the resources available to support that population. The question that must be answered is----does the entire planet have enough resources to support the estimated 9.4 billion people who will be alive in 2050 for a reasonable length of time, at a standard of living that does not result in resource wars? Those who point out that the entire world's population can fit into the state of Texas have no understanding of the problems facing humanity. More importantly, a second question must be answered----if population growth continues after 2050, is there a limit to the population that can be supported by the resources of the planet? Clearly the answer is yes. Those who believe population can continue to grow have not come to grips with the problem of continued growth. There isn't any logical or other connection between the number of people who can live in Texas and the need to control population growth. If all of humanity resided in Texas they would need the resources of the entire

planet, and those resources would not be able to permit all of humanity to exist for any length of time at a reasonable standard of living.

BLOWING UP A BALLOON

When population growth is reduced to zero or attains negative status, as it must, either through war or by the intelligence of humanity, humanity will have to cope with a completely revised economic paradigm. Almost nothing has been written by economists or others about how the entire world's economy will function when population is static or decreasing for an extended period of time. Every economic concept up until the present has been based on growth—growth of population and the growth of the economy. There will be substantial economic hardship with a great deal of suffering as the necessary changes are made from a growing economy to a static or decreasing economy on a world-wide basis.

Society must be prepared to cope with that situation. As bad as that situation may become, it is nothing compared to the suffering that will happen to humanity if population and economic growth are permitted to continue. There will be a great deal of pain and suffering unless our leaders plan for the inevitable situation of a stoppage of economic and population growth. Attempts to stimulate the economy remind me of a person blowing up a balloon—as the person blows a pin hole develops and the person puts a patch on the pin hole and continues to blow, a second pin hole develops and he again patches the pin hole. This occurs a few more times. Suddenly the balloon bursts and nothing is left. Our governments are doing all they can to stimulate population and economic growth and a time will come when the balloon bursts resulting in massive death and destruction. Governments cannot change the inevitable and create jobs for people who do not have the skills or cannot be trained to have the skills necessary to function and survive in our ever exceedingly complex and technical society. Attempts by governments to create such jobs are not only doomed to failure, but are extremely harmful.

More importantly, government and society cannot and will not be able to provide jobs to a continuously growing population. Any attempt by government or anyone else to provide jobs to a continuously growing population is doomed to failure. Any statements made by the leaders of humanity that they will provide jobs to an ever-growing population are the words of fools.

Many who are opposed to what is written here and who are familiar with the population problem, will point to a bet made some years ago between Professors Paul Ehrlich, of Stanford University, and Julian Simon, of The University of Maryland, about the price of minerals. Professor Ehrlich

took the position that the price of those materials would increase because minerals were limited and demand was increasing. Professor Simon took the position that they would go down or remain the same because of humanity's genius and ingenuity. Simon won the bet and Ehrlich's loss caused a great deal of harm to those who had taken the position that the earth was finite and an exploding population was using up the finite resources. The problem with the bet is that it was based on a limited period of time, not long enough for the effect of exploding population and a finite amount of materials to prove Ehrlich correct in his position. A more recent examination of the price of various important minerals shows that Ehrlich was correct:

	2002	2007	% Increase
Aluminum (\$/metric ton)	\$1,365	2,661	95
Copper (\$/lb)	\$0.70	3.22	360
Com (\$/metric ton)	\$100	170	70
Gold (\$/oz)	\$310	697	125
Nickel (\$/lb)	\$3.1	17.1	452
Oil (\$/barrel) *	\$26	72	177
Steel (\$/metric ton)	\$256	555	117
Zinc (\$/lb)	\$0.35	1.45	314

*Note: Since I began writing this book, the price of oil reached a high of over \$145 per barrel and then dropped to about \$35 per barrel

To those readers who agree with Professor Simon, I ask them to consider resource prices if population continues to grow and the human population reaches 15 billion, 20 billion, 50 billion, or 100 billion. I ask those readers to consider resource prices if the economy of the world grew by a factor of two, five, fifty, or fifty thousand. Is there any number I can write that will be large enough for those who agree with the position taken by Professor Simon to change their position and agree with Professor Ehrlich? If they say that there isn't any number large enough for them to agree with Professor Ehrlich, then I say they are wrong. If those who agree with Professor Simon agree that at some point, if population and/or the economy continue to grow, the prices of resources will increase in real terms and not due to inflation, then I say all we are debating is when the price of resources will increase dramatically. If the population and the economy continue to grow, the price of resources must increase. No one on the face of the earth can present a logical and factually supported argument that if the economy were 500 times as

large as the current economy and the population of the world were 200 billion people the price of resources in real terms would not increase.

Almost all of humanity does not understand that economic law --- price is determined by supply and demand--- applies to everything, and that no action by government or any other human entity can change that law. The history of price controls shows that over the long run they are a failure. No matter how efficiently humanity uses fossil fuel, particularly oil, the demand for fossil fuel and oil will increase for the reasons set forth herein. No matter what humanity does, humanity cannot change the fact that there is a limited amount of fossil fuel on the planet—human ingenuity cannot increase the number of fossil fuel atoms. No, that is not correct! The amount of fossil fuel on the planet is decreasing--every time a gallon of oil is taken from the ground and used there is less fossil fuel on the planet, every time a ton of coal is mined and burned there is less fossil fuel on the planet. Humankind cannot change the fact that the amount of fossil fuel available for human use is decreasing every second. Based on increasing demand and decreasing supply, the cost in real terms of fossil fuel must increase in the long run. Humanity cannot repeal or change the law of supply and demand. Yes, humanity can use fossil fuel more efficiently, and yes, humanity can attempt to use substitutes for fossil fuel, but in the long term the supply of fossil fuel must be exhausted. No matter how efficiently humanity uses fossil fuel, and no matter the attempts made by humanity to use substitutes, the price of fossil fuel will increase and the price of everything that uses fossil fuel will increase. Eventually the cost of fossil fuel will cause the price of food to increase beyond the ability of a substantial number of human beings to afford food, causing massive social unrest and the collapse of the social order—causing revolution and terrorism. When there is massive starvation and the collapse of the social order, a person or a group of people have nothing to lose by the irrational and complete destruction of everything around them.

The economic law of supply and demand applies to every resource on the planet, and since the demand is increasing every day due to the increasing population and the exploding world economy, and since the supply is finite because no resource is infinitely large, or because the supply is decreasing due to the usage by humanity, the cost of every resource must eventually increase no matter the intelligence or creativity of humankind. This effect is compounded by the fact, set forth above, that every day it is becoming more difficult and expensive to obtain the resources as humanity has already used the easiest and cheapest resources available.

Many people disagree with the concept that only humanity can control the population growth of our species. They argue that disease or

something else would reduce population and save humankind from its destruction. They do not understand compound growth. Assume that a new horrible disease afflicts humanity reducing population by 99%, leaving only 1% surviving. After population is reduced to 1% of its original number, assume that population growth again starts at the compound rate of 2% per year. At that rate, something doubles about every 35 years. That means that at the end of 35 years population will double, and that there will now be 2% of the original population alive; at the end of 70 years there will be two doublings and population will reach 4% of the original number; and at the end of 105 years the percentage will reach 8% of the original population. If population continued to grow at the compound rate of 2% per year, it would take eight doublings, or 280 years, for population to reach 128% of the original number of individuals who were alive before the disease started. You don't like my using a growth rate of 2% per year? Let us try 1% per year. At that rate of growth, it would take 560 years for population to reach 128% of the original number of individuals who were alive before the disease started.

Disease and starvation or anything else that reduced human population will not solve the problems facing humankind, unless population growth was reduced to zero after the original reduction.

While not liking the idea of separating humanity into two groups, any reader must realize that every act of sexual intercourse which has taken place and which will take place in the future between a man and a woman of child bearing age determines who will be a reproducer and who will be a non-reproducer. Every act of intercourse determines which genes are or are not transmitted to the next generation. By the use of birth control, a couple may choose not to have their genes or only a limited amount of their genes transmitted to the next generation. If a couple has five children, more of their genes will be transmitted to the next generation than if they had only one child. Since each human being has a different set of genes and, therefore, has different skills to some degree, the genes that are transmitted to the next generation determine the course humankind will take. The future of humanity is determined by the genes transmitted to the next generation and the relationship of those genes to the skills necessary to survive in the next generation.

As set forth herein, not everyone can or will be trained to have the skills necessary to function as the environment and needs of society change. While education and training can help a person obtain the necessary skills, there is a genetic component to the skills and those individuals who received the appropriate genes from their parents will be in a better position to survive and reproduce than those who did not receive the appropriate genes. Today every person who has sexual intercourse is

determining who will survive and reproduce and who will not reproduce. Today humanity is doing it in a random manner.

The random determination of which members of a species could or could not reproduce has been acceptable for every other species because they did not have weapons of mass destruction. Nature selected who would survive and reproduce and who would not survive and not reproduce, and nature performed this feat by violence. The law of natural selection, survival of the fittest, evolution, Darwinism, worked for every other species. The random determination of which human beings will reproduce and which humans being will not reproduce will not work for humanity, because humanity has weapons of mass destruction. If a sizable portion of a species, other than the human species, died because they did not have enough food to eat, the survivors would continue the species. If a sizable portion of humanity were to die because there isn't a sufficient amount of food or other resources, it is highly likely that group "A" or nation "B" would attempt to obtain the necessary food or other resources from its neighbors, resulting in resource wars with weapons of mass destruction. No one knows at what exact point the lack of food or resources would trigger a war. But that is unimportant. At some point as population expands, that point will be reached. For all species, except the human species, the random determination of the reproducers will occur when population exceeds the carrying capacity of the environment or niche occupied by the species, and those genetically superior will survive. Humanity is different. When the carrying capacity of the earth is exceeded and resource wars occur, weapons of mass destruction will determine who survives, if anyone. There isn't a place to hide that is or will be safe. Humanity must be smart enough to create two groups—those who reproduce and those who do not reproduce, so that our species can survive. The question is---can we create the two-group solution so that humanity does not destroy itself? That is the toughest question that ever has faced humanity or will ever face humanity in the future.

WATER SHORTAGES

While I have written above about the fact that humanity will shortly exhaust the supply of oil and other fossil fuels, many experts believe that the problem of water availability will be more devastating to humanity, both in the short term and in the long term. A substantial portion of the increased food supply over the last 40 or 50 years is due to the fact that the percentage of food grown on irrigated fields has increased dramatically. Humankind has used its ability to modify the environment so that a substantial portion of its food supply is no longer dependent on rainfall. Growing food requires very large amounts of water, on the average 1,000 tons of water are needed to grow one ton of grain. While

humanity has the ability to desalinate water, the cost of doing so for food is not now and will not be for the foreseeable future economical. In addition, many or most of the major food growing areas are hundreds, if not thousands of miles, from the nearest place where seawater could be desalinated and then pumped to them. Almost every expert agrees that the cost in dollars and in fuel of pumping desalinated seawater to areas where food is grown prevents the use of desalinated seawater to grow crops. And to desalinate water takes large amounts of energy that will not be available when humanity runs out of fossil fuels. While humanity can try to genetically modify many of the food crops used by humanity to use seawater rather than fresh water, humankind cannot bet its survival on that occurring in time to prevent the destruction of our species. Even if seawater could be used to grow some crops, the energy cost of pumping the seawater to the food growing areas would prohibit the usage of seawater to solve the food-growing problem. To summarize, humanity should not and cannot depend on seawater to provide the water necessary to grow the food needed for the exploding human population.

Fresh irrigation water can be obtained from only three sources---a) rivers fed by rain, natural springs, or melting glaciers; b) stored fresh water such as water behind dams or other artificial barriers; and c) aquifers. While I do not want to get into a discussion/debate about the cause of global warming, almost every expert believes that the earth is undergoing a period of warming that will affect glaciers in a manner which will reduce their ability to provide irrigation water for food crops. Many rivers are now being used to the maximum to provide irrigation water--- the Colorado in the USA barely reaches the sea. Many rivers in China run dry before they reach the sea. In fact, within the last few months, a number of reports have been issued which discuss the chance/possibility/probability that Lake Mead, the very large man-made lake created by Hoover Dam and the flow of the Colorado River near Las Vegas, Nevada, will become a dry mud hole by 2021. The level of Lake Mead is down over 125 feet and the government is spending about \$700 million to tunnel below Lake Mead to add another “straw” so that water can be withdrawn from the lake and used by the residents of Las Vegas and the Southern United States.

The Colorado River serves, in one form or another, about 27 million people in the Southwest United States, plus enormous amounts of agricultural land. If Lake Mead were to become a dry mud hole, the social upheaval would be beyond the imagination of anyone. If Lake Mead were to become a dry mud hole caused by the lack of water flow of the Colorado River, all of the resources of the US Government probably could not solve the problems that would arise from that catastrophe. No one knows what will happen in the future, but these reports have been

issued by respectable scientists and/or respectable scientific institutions and must not be tossed aside without consideration.

Most importantly, the aquifers under the grain growing areas of the USA, the Middle East, Mexico, and China, are being depleted at a rate that will prevent their usage for the irrigation of food crops in the very near future. Once those major aquifers are no longer able to provide the necessary water to irrigate those crop-growing areas, nothing can prevent massive human starvation on a global scale from happening. Lester Brown of the Earth Policy Institute has written---“Fossil aquifers, however, are not replenishable. For these—including the vast U.S. Ogallala aquifer, the deep aquifer under the North China Plain, or the Saudi aquifer, for example-depletion brings pumping to an end. Farmers who lose their irrigation water have the option of returning to lower-yield dry land farming if rainfall permits. But in the more arid regions, such as in the southwestern United States or the Middle East, the loss of irrigation water means the end of agriculture.” If population growth continues, the question of starvation due to the lack of food due to the lack of water becomes not if, but when. And very soon!

The following are countries that are over-pumping their aquifers in 2009—the population column does not total due to rounding.

Country	Population in the millions
China	1,346
India	1,198
Iran	74
Israel	7
Jordan	6
Mexico	110
Morocco	32
Pakistan	181
Saudi Arabia	26
South Korea	48
Spain	45
Syria	22
Tunisia	10
United States	315
Yemen	24
Total	3,443

The above table is from a book written by Lester Brown, *Plan B 4.0: Mobilizing to Save Civilization*, published by W.W. Norton & Company, 2009.

Many of the aquifers are "fossil aquifers." Fossil aquifers take an extremely long time to refill. Humanity is using the water supplied by those aquifers for irrigation to supply food to humanity today, without consideration that the water will soon run out---they are not being refilled by nature, and will not be refilled by nature for very long periods of time.

Unknown to the people of many poor countries, those countries are selling their water to countries that are able to pay for it. This is done by permitting the buying countries to buy or enter into long-term leases for very large parcels of land---hundreds of thousands of acres. The buying countries use the land to produce food that is shipped to the buying countries. The food is not produced for the benefit of the poor people who live in the selling countries. Since food takes very large amount of water to grow, the selling countries are, in effect, selling their water to the detriment of their poor citizens. In addition poor farmers are being

thrown off their land. These situations will lead to massive social unrest in the selling countries. In fact, these situations must lead to war and massive death. When the poor of the selling countries revolt and stop the shipments to the buying countries, the buying country has a choice--send in its army to get what it paid for, or permit the poor of the selling country to rob the buying country of the food it needs for its citizens to live. And the poor of the selling countries will revolt when they understand the situation and billions are starving.

EASTER ISLAND—A LESSON WHICH HUMANITY MUST HEED

The ecological devastation caused by the exploding human population on Easter Island in the Pacific Ocean should provide a warning and guidance to all of humankind. Easter Island is an island in the middle of the Pacific Ocean that until recent times had no interaction with other landmasses, and whose population had no interaction with other human beings. To put it in simple terms, the inhabitants of Easter Island were alone in the middle of the Pacific Ocean and were forced to live or die based upon the limited resources of the island. Our planet, the earth, is in exactly the same situation---all of humankind exists on the earth in the middle of space, and will be forced to live or die based on the limited resources of our planet.

According to the experts, a few human beings arrived on Easter Island and found a vacant island paradise. Population grew and grew until humanity destroyed the island paradise, until all or almost all of the resources of the island paradise were destroyed and resource wars followed which resulted in the deaths of almost all of the humans who had inhabited the island. While no one has made a scientific analysis of the intelligence of the inhabitants of Easter Island, there isn't any reason to presume that, on the average, they were any less or more intelligent than the rest of humanity. According to those who have studied Easter Island, the situation became so bad that those who remained alive resorted to cannibalism, and to make the situation even worse, they were forced to eat those they killed raw because there wasn't any fuel on the island to cook those to be eaten. Again the cause of the death, destruction, and cannibalism, was the excess population in relation to the resources that could be provided by the island.

The very same thing will occur to the rest of humanity on the planet earth. If humanity uses more resources than can be provided by the planet on an annual basis, our species is doomed. While the entire planet is larger than Easter Island, there isn't any difference between Easter Island and our planet. They both are finite in size and both have resources that have been or will be exhausted. The intelligence of

humankind will not change the result. The intelligence of those who lived on Easter Island did not change the result.

The inhabitants of Easter Island refused to see the future and take appropriate action to prevent their destruction. The human species is refusing to see the future and take the appropriate action. Humanity cannot afford to gamble that what occurred on Easter Island will not happen to our planet. In evaluating the applicability of the scenario of Easter Island to the entire planet, consideration must be given to the island of Tikopia. Tikopia is an island similar to Easter Island—it is in the middle of the Pacific Ocean and its inhabitants were forced to live or die based on the limited resources of the island. However, the residents of Tikopia used population control mechanisms and survived. Those mechanisms included celibacy, contraception, abortion, infanticide, and sending young males out to sea on what were, in effect, suicide missions. I cannot and will not dispute that the population control mechanisms themselves were horrible, but the society survived. With the better methods of birth control available today to humanity, the population control mechanisms used today will not be as horrible as those used on Tikopia. The population control methods available to humanity today are very benign and inexpensive.

Some experts disagree with the concept that overpopulation in relation to the resources of the island was the cause of the catastrophic decrease in the population of Easter Island. They argue that the rats that were brought by those who populated Easter Island were the cause of the catastrophic decline in population—the rats destroyed the ecological base of the island, which was necessary to support those inhabiting the island. Which group of experts is correct is unimportant. In either case, human activity was the cause of the decline, and the lesson is the same for all of humanity presently living on the earth.

DESTRUCTION OF PRODUCTIVE LAND AND DESTRUCTION OF FISHERIES

While some people believe that there can be a debate about whether global warming is caused by human activity or a part of a natural cycle, there cannot be a debate that humankind is destroying the resources of the planet, which will lead to the destruction of our species. What is desertification? It is the destruction of valuable productive land, converting it to useless desert by overuse. Two examples- Nigeria and China.

Nigeria's population has grown from 33 million in 1950 to 132 million in 2005 and is expected to reach 258 million in 2050—a population growth of close to eight times ($258 \div 33 = 7.82$) in just 100 years. (A side

comment—if that rate of growth were to continue for just an additional 100 years from 2050 to 2150, the population of Nigeria would exceed 2 billion people and their isn't any reason to believe that the rate of population growth will decrease.) The Pope goes to Africa and demands that the inhabitants of that continent, including the people of Nigeria, have sex without a condom on the pain of eternal damnation, even if one of the parties has HIV/AIDS. During the period from 1950 to 2000, Nigeria's animal load on the land increased 11 fold, from 6 million animals to 66 million animals. That increased load caused overuse of the land and lead directly to the desertification of over 351,000 hectares (over 867,000 acres) of land each year. That land is no longer productive and cannot support either animal or any type of plant growth beneficial to humanity. Extrapolating that destruction, when Nigeria's population goes from 132 million in 2005 to an estimated 258 million in 2050 and the animal load on the land increases proportionally, the entire situation becomes frightening beyond words.

According to the last estimates published by the Chinese Government, China lost 1,560 square kilometers of land each year to desertification from 1950 to 1975; 2,100 square kilometers each year from 1975 to 1987; and from 1987 to the present the number increased to 3,600 square kilometers per year. During the period 1950-2008, China, just one of the countries on the planet, lost 143,400 square kilometers of productive land to desertification.

Humanity cannot afford to lose productive land to desertification, cannot afford to turn good agricultural land into wasteland, especially when population is increasing at the rate of about 200,000 human beings every single day. And no day is exempt from the increase of population. The desertification in Nigeria, China, and the rest of the world is continuing, and continuing at an accelerating rate. Don't be fooled into believing that the population of China is stable or decreasing in size due to the "one child policy". The best estimate is that the population of China will continue to increase to at least 2050. As pointed out elsewhere in this book, after a nation reduces its fertility level to replacement value, the population will increase for about 70 years and not stabilize until the population is 50% greater than the starting value.

It should be noted that desertification is not the only way to destroy valuable food producing land. Ancient empires in the Middle East were destroyed when excess irrigation caused the salinization of the food growing land. While I do not have any numbers about the current salinization of land, humanity should be aware of the possibility of that occurring as humanity increases the amount of irrigated land.

Humanity is destroying the oceans as a source of food not only for the current generation, but for all future generations, by over-fishing and by causing “dead zones”. Almost everyone can understand that huge commercial fishing vessels use modern technology to harvest huge amounts of fish every day, destroying the ability of many fish species to reproduce and survive. Few of us understand that fertilizer run off causes algae in the ocean to bloom far beyond what would be considered normal. The algae bloom sucks oxygen from the ocean below it such that fish will, in effect, suffocate because the ocean does not contain enough oxygen to support fish life. No fish, no food for humanity! Dead zones in the ocean are growing larger every day.

As of the year 2006, according to the experts, one-third of the seafood species have collapsed. That means their catch has declined 90% below the historic maximum. Of these sea species, seven percent have become extinct. If the human population continues to grow, and if humanity does not change how it manages the oceans of the world, and does not change the amount of fish it takes from the oceans, there is a possibility/probability that 100 percent of the species will collapse by the year 2048. Fish will no longer be a part of the human diet. Those nations that depend on seafood for a large part of their diet will suffer massive starvation. And, of course, that part of the world’s economy, which depends on fishing, will collapse, causing massive social upheavals. Many of the fish species will be so depleted that they will never recover sufficiently to ever become a source of food for humanity.

While no one knows if the possibility/probability of a 100% collapse will occur by 2048 or by any other year, humanity cannot afford to take the chance that fish will no longer be a part of humanity’s food, or be reduced by at least 50%. The main force causing the decline in fish stocks is the exploding human population demanding fish for food and not caring about the future survival of the human species. If I am starving today and my family is starving today I want food today and do not care if there isn’t any food in the future.

THE COMPOUND EFFECT OF EXTENDED LIFE EXPECTANCIES

In evaluating the need for the control of population growth, few people realize that extending the average life expectancy has a compound effect. Not only does the average person live longer, but due to the extended life span, more people are alive to use the resources of the earth. For example, assume that there are 10 people alive and that their life expectancy is, on the average, 40 years. Based on those assumptions the earth has to support 400 man-years (10 x 40). If life expectancy were increased to 80 years, two additional generations would be born and be alive for the average life expectancy. It would mean that population

would double at least to 20 persons, and that they would live, on average to 80 years. Therefore, the earth would have to support 1,600 man-years, (20 x 80) or four times the original number of man-years the earth would have been required to support, if life expectancy did not increase. While it is the obligation to extend the life expectancy of every human being, humanity must understand by doing so it is placing an enormous burden on the earth. A thought for you to consider—what would happen to humanity if medical science were able to increase the average life expectancy, in good health, to the age of 150? Such an increase would lead in an ultra-short period of time to the destruction of humankind due to the compounding effect described above. To put it very directly, every increase in the average life expectancy of all of humanity, no matter how small an increase, must lead to the destruction of humankind, unless an offsetting reduction is made in the population.

Now to a much more horrifying situation! Assume that population goes from the present estimate of 6.7 billion to the estimate of 9.4 billion in 2050, and assume that the average life expectancy increases by ten years from 60 to 70 years in 2050, and then assume that the average per capita usage of resources increases by 25% by 2050 due to the increased standard of living in China, India, and the rest of the world. That would be the “perfect storm”, to use the words taken from a recent movie.

First, I challenge anyone to present a logical argument that the assumptions I made (an increase in population from 6.7 to 9.4 billion, an increase in life expectancy of ten years, and an increase of 25% in the average per capita usage of resources) can never happen by 2050. Unless humanity can be absolutely sure, and I mean absolutely sure, that the perfect storm will not occur, humanity must determine what course of action it must take today to prevent its total or almost total destruction. I challenge anyone to present a logical argument that if the perfect storm were to occur humanity would not run out of resources prior to 2050, and that due to the exhaustion of resources the social order would not collapse by 2050. If the perfect storm were to occur, the burden on the resources of the earth would more than double (1.40 due to the population increase x 1.25 due to the per capita increase in the usage of resources x 1.16 due to the estimated increase in life expectancy = 2.03) by 2050—more people alive, each person living longer, and each person using more resources.

A doubling of the burden would probably be beyond the ability of the earth to furnish the resources necessary to maintain civilization as we know it, and a doubling of the burden would probably result in the immediate destruction of almost all of humanity. Humanity today has probably exceeded the carrying capacity of the earth or, if it has not already exceeded the carrying capacity, it will do so in the very near

future. For humanity to demand that the earth produce twice the resources on an annual basis than it presently produces is the height of folly and stupidity. You may want to go back to the short list of the problems facing humanity today and consider those problems anew if the demand for resources were to double by 2050. A question for you to consider---how would humanity function in 2100 if population were to reach 11 billion, average life expectancy were to reach 80, and the average per capita usage of resources increased by 50% over the per capita usage of resources in 2008?

THERE CANNOT BE ANY PROCREATIVE "RIGHTS" IN AN OVERPOPULATED WORLD

Anyone who disagrees with the concept of limiting population and economic growth must take the position that both can grow infinitely large on the finite earth, and that position cannot be logically defended—it cannot happen. Since both the economy and population must cease growth, we are left with two and only two questions—when and how will both cease. It is almost axiomatic that the larger the population and the larger the economy, the more difficult it will be to cease the growth of either or both. Growth tends to be self-perpetuating, and the longer growth continues the more difficult it will be to prevent the destruction of humankind. Anyone who believes that growth can continue without resource wars with weapons of mass destruction must be correct in his/her position forever. He/she cannot be wrong even once. Humanity cannot permit a single war with weapons of mass destruction as that war would probably result in the almost total annihilation of all of humanity, and surely would result in the destruction of civilization as we know it. Humanity cannot afford the gamble.

Since no one knows when population and economic growth must absolutely cease in order to prevent the destruction of humankind, the wise and intelligent position is to cease growth of both population and the economy of the world today. No! The wise and intelligent position is to immediately start a substantial reduction in population, which will cause a contraction of the economy of the world, which in turn will result in a decrease in the usage of the resources of the planet by humanity.

Let us now look at GWWP (Gross World-Wide Product) from a different point of view. Annual GWWP must reach a maximum, if humanity wants to survive. If humanity uses, on an annual basis, more resources than the earth can replenish, if humanity draws down the capital of the earth, eventually the earth will be unable to supply the resources humanity needs to survive, notwithstanding the intelligence and genius of humankind. In all probability, humanity has already exceeded the annual amount of resources the earth can provide in order for humanity

to survive for any reasonable length of time. Yes, human intelligence can increase the annual GWWP by using the resources of the earth more efficiently either through environmentalism or new technologies. However, the intelligence of humanity cannot and will not permit humanity to forever increase the annual usage of resources and forever increase the GWWP.

When the maximum GWWP is reached, a very simple formula explains what must happen to humanity. That formula is---GWWP equals the average standard of living times the human population of the world. Example---assume that GWWP is 10,000 units of economic production and assume further that the average person uses 10 units of economic production, then population must equal 1,000 people ($10 \times 1,000 = 10,000$). Now let us look at what happens if the average standard of living goes up such that the average person uses 20 units of economic production. If that were to occur the number of human beings that could be supported would be reduced to 500 ($20 \times 500 = 10,000$). In simple terms, once the maximum annual GWWP is reached, as the average standard of living goes up, the number of people the earth can support must go down or humanity will not survive.

Some people will argue that the genius of humankind will be able to increase the amount of resources that can be used annually without causing the destruction of humankind, and they will argue that humankind will use resources more efficiently such that fewer resources are needed per unit of production. Those arguments and many similar arguments are absolutely true, up to a certain point. However, those arguments will fail when humanity reaches the maximum GWWP that the earth can support. At some point in time, humanity must understand that the maximum GWWP has been reached, and that the formula set forth above applies to humanity. No matter what humanity does, GWWP requires resources. Since resources are limited by the fact the earth is finite, GWWP cannot continue to grow and become infinitely large. As set forth above, the intelligence of humanity cannot increase the number of atoms that make up the earth.

Humanity cannot afford to gamble that the formula set forth above will never apply to itself. To make the situation more horrible, assume that instead of going down, population increases to 5,000, then the average standard of living must come down to two ($2 \times 5,000 = 10,000$). If the average standard of living appreciably decreases, there will be wars and/or other major catastrophes, which will violently reduce the human population by the billions.

The question should be---What harm will all of humankind suffer, and what harm will individuals suffer, if all of humankind were divided into

two groups—the reproducers and the non-reproducers-- and if that determination were done in a moral and just manner, or at least as close to a moral and just manner as humanly possible? Though it must be conceded that such a determination could never be entirely perfect or morally unblemished, refusing to make it will not prevent its being made according to the arbitrary criteria of nature.

In pursuit of this point, let us assume that the only action taken to reduce population is to limit who can reproduce. Assume further that no other action is taken—no one is killed, raped, murdered, deprived of a job, deprived of any benefit of society, ostracized, placed in a concentration camp, limited to whom they can or cannot marry, or limited where they can live, and no one is harmed in any way so long as that person does not reproduce or attempt to have more children than he or she is allowed. Relative to the harm inflicted by continuing population growth, the harm inflicted by the reasoned and deliberate designation of reproducers and non-reproducers would surely be minimal.

Assume that 20% of the population that should be permitted to reproduce is prevented from reproducing, what is the harm to the individuals and what is the harm to society? Another assumption--assume 15% of the population that should not have reproduced is allowed to produce, what is the harm to the individuals and what is the harm to society? In both cases, in the next few generations the errors will correct themselves as the determination as to who can and who cannot reproduce is made anew each generation, under the method of determining who can procreate, which I will propose.

SHOCKING PROPOSALS

And now get ready for the most provocative portion of the book! I believe that it will take years before humanity agrees on a value neutral, moral, and just method to determine how to divide human beings into two groups. I have a few suggestions as to how that goal can be achieved, which I will set forth below. However, they are only my suggestions and I am sure that there will be hundreds, if not thousands, of other suggestions and proposals. However, humanity cannot wait many years to commence the reduction of human population. Steps must be taken today which will reduce population growth to a negative number. Steps must be taken today which will reduce the human population below the current (at the time I started to write this book) 6.7 billion (7.0 billion in 2011) who live on this planet. The survival of our species depends on action today. As set forth above, the division into two groups will have to wait until population is substantially reduced by limiting everyone to one and only one child as described in the paragraphs below.

The action I am initially proposing is value neutral and does not favor or harm any individual or group. The action I am proposing will be applied to every person or group without favoring anyone. The action is very simple---limit the right of any male to father only one live child, and limit the right of every woman to one live birth. In simple terms, a couple is limited to one and only one child—not one child for the male and one child for the female.

These limitations would be applied to every single human being without regard to race, religion, national origin or anything else, and it would be absolute, no exceptions. It would be applied without regard for wealth, or the lack of wealth, and it would be applied without regard for the country of birth or residence of either the male or female. It would be applied without regard to intelligence, or the lack thereof, and without regard to the ability of the male or female to function in society. (At a later date when a method is agreed upon relating to dividing human beings into two groups, the ability to function in society would be considered in relation to who could or could not reproduce.)

The right to either father a child, or for a female to give birth, could not be sold or transferred; it would be personal to the individual. If a live child were born with a birth defect or with some other disability, it would not permit either the father or mother to produce another child. Each couple would have the right to have all appropriate pre-natal tests to determine if the child in the womb would be born with a birth or genetic defect and, if the chance existed that the child would be born with such a defect, to have an abortion.

Since survival of our species depends on the one child rule, under my proposal any attempt to evade the rule would result in death of the evader and of any second child. The rule, to be fair, must be absolute, without a single exception. If the female cannot (or refuses to) provide the name of the father, she and the child shall be immediately executed. All of the ideas set forth in this paragraph may be considered horrible and inhumane. However, since they will be applied equally, no individual or group is harmed except to the extent that an individual cannot either father or give birth to a second child. The harm caused to the individual and the harm caused to all of humanity by enforcing the one child rule set forth above is miniscule compared to the harm which all of humanity would suffer if population were not reduced.

Since the birth of a child is very hard to hide, there must be communal responsibility and accountability for any attempt to do so. Those who knowingly failed to report the birth of a second or any higher number of children would themselves be subject to the very same severe punishment that would be meted out to the parents of the second or

higher numbered child—no religious, cultural or ethnic exemptions would obtain. Humanity cannot consider the evasion of the single child rule a game to be played with a minor penalty, if caught. No group or individual could be permitted any evasion of the one child rule as that would lead to a disparity among groups and among individuals causing irreparable harm to the entire system established to reduce population. Should this sanction seem barbaric or draconian, it is surely less draconian in its effects than the merciless verdict of nature upon a species that refuses to contain its expansion.

In order for this proposal to be fair, equitable, and workable, society and governments would be required to take action today to provide the means for every human being to control his or her fertility, to give everyone on the face of the earth the ability to limit birth to a single child. Governments would be required to devote whatever portion of their Gross Domestic Product is necessary to the provision of artificial birth control devices of any and all types, including sterilization, at low or no cost as appropriate, to their citizens, no matter the age of the citizens once a citizen reaches the age he/she can physically reproduce. This would also include instruction as how to use the devices. This would also include education of both males and females that the birth of a second child would result in the execution of the father and mother, as well as the child. Governments would be required to provide safe, as much as any medical procedure can be safe, and low cost or free, access to abortion. If any person, either male or female, had more than two abortions due to failures of birth control devices, it would be conclusively presumed that the person was unable to use birth control devices, and the person would be physically and permanently sterilized.

If poor nations were unable to devote the necessary funds to accomplish the one child rule in five years, the rich nations of the world would be required to assist the poor nations, after an evaluation that the poor nations were doing the best they could under some reasonable standard. Since survival of our species depends on reducing population below the 6.7 billion humans alive in 2008 (7.0 billion in 2011), the necessary funds to establish the system to control population must be made available. It should be emphasized that a “One-Child-Per-Family” (OCPF) law that is almost completely effective will not suffice. It must be totally and universally effective. After a five-year preparation period, the rule must be enforced. The reduction in population would continue under the one child rule until all of humanity agreed upon the method and criteria necessary to implement the two-group solution described herein.

Population would continue to be reduced pursuant to the method and criteria of the two group solution until it reached 300 million or some other lower number agreed upon by humanity. The number finally

agreed upon would be based on the ability of the earth to provide resources for humanity to maintain an acceptable standard of living for a minimum of 25,000 years. And 25,000 years is infinitely small when compared to the 160 million years the dinosaurs ruled the earth.

No doubt any proposal that would recommend capital punishment for transgressors of the One-Child-Per-Family law presently evokes immediate revulsion and rejection. Outside the context of an imminent die-off, given our heritage of moral, religious, and cultural programming, I would be surprised if it didn't. An example that shows that morality changes when circumstances change follows.

Any Londoner who proposed in August 1938 that the Royal Air Force should one day bomb German cities with women and children in them, would be summarily dismissed as a callous barbarian. But just two years later, Londoners were clamoring for that action. Reality has a way of effecting abrupt ethical changes. What is not presently comprehended by almost all of humanity is that we are now in an emergency. Our species is on the brink of an unparalleled catastrophe—our destruction and the destruction of our civilization.

It is a matter of complete indifference to me that many, if not all, readers will find the execution of anyone having a second child to be horrible and against every moral precept they learned, or understood was applicable to humanity. The problem is not that my prescriptions are immoral or horrible. Rather the problem is that the situation humanity finds itself in is horrible. I will now remind the readers that under the law I propose, every individual would be well aware of the consequences of flouting the law. Which of the two evils is worse--- a) executing anyone who knowingly violates the one child rule; or b) not reducing population such that the vast majority or probably all of humanity is destroyed?

Under this system, fertility drugs would not be permitted, or if they were permitted and used, only one child would be permitted to be born alive, or the rest would be destroyed at birth, if more than one were born alive. If a woman gave birth to more than one child and fertility drugs or any other actions to increase fertility or the number of children born were not the cause, those children would be permitted to live. Each individual will have a very clear choice—execution or birth control or sterilization or abortion or abstinence.

Let us examine the concept in another way---if someone believes that the earth can support the current population of 6.7 billion (7.0 billion in 2011) or a larger population, and that person is incorrect in his belief, the result would probably be the destruction of humanity and the destruction of civilization. Billions of men, women, and children would

die! If I am incorrect and the earth can support a level of population of 6.7 billion or larger, the only harm my philosophy would cause is to limit the right of reproduction to only one child. If we compare the risk/benefit ratios of both choices, I believe my choice is the best for humanity.

I challenge anyone reading this book to present logical and defensible arguments supported by facts, and not hopes or desires, for or against some or all of the following propositions or statements:

a) Against the proposition that the earth is finite and for the proposition that the earth is infinite.

b) For the proposition that the earth has an infinite amount of resources that can be used by humanity.

c) For the proposition that the earth can support an infinitely large population.

d) For the proposition that the earth can support 10 billion, 20 billion, 30 billion, 50 billion, 100 billion, 500 billion humans, for at least 5,000 years—you pick whatever number you desire and then defend that number.

e) Against the proposition that human population grows in a compound manner.

f) Against the proposition that the social order will collapse, if population continues to grow.

g) Against the proposition that population will continue to grow unless all of humanity uses artificial birth control.

h) Against the proposition that if population continues to grow there is a strong probability that resource wars—wars about the lack of resources—will occur in the very near future.

i) Against the proposition that if population continues to grow, humanity will exhaust one or more resources needed for the continuation of modern civilization.

j) Against the proposition that if wars (multiple wars over an extended period of time) happen, at some point in time weapons of mass destruction will be used in one or more of those wars.

k) Against the proposition/mathematical fact that if something/anything were to grow at the compound rate of one-tenth of one percent (0.0010) per year, it would double in about 700 years, quadruple in about 1,400 years, and increase by a factor of eight in about 2,100 years.

l) Against the proposition that evolution has applied to every living thing (plant or animal, large or small, complex or simple) that ever existed on the earth.

m) Against the proposition that evolution has always required that the population of a species be divided into two groups—those who survive to reproduce and those who do not survive to reproduce---when the maximum number of individuals in the niche occupied by the species was reached.

n) Against the proposition that evolution for every species has always been controlled and guided by the environmental niche occupied by the species—example, if a plant needed two inches of water to survive and reproduce, and if the environment changed such that only one inch of water was available, the genetic composition of the plant would have to change such that one inch of water would permit the plant to survive and reproduce, or that plant species died out.

o) For the proposition that evolution will never apply to the human species.

p) For the proposition that the gene pool of humanity will never change, no matter how the environmental niche occupied by the human species changes.

q) For the proposition that the gene pool of humanity will never change, no matter how human society changes, and no matter what skills are needed to function in society.

r) For the proposition that population growth of the human species will be voluntarily reduced to zero by the year 2100.

s) For the proposition that if humanity were to reduce voluntarily population growth to zero by the year 2100, it would remain at zero for the next 2,000 years.

t) For the proposition that humanity could obtain resources from other celestial bodies in sufficient amount and within the time necessary to prevent the destruction of humanity, if humanity were to continue to grow at the compound rate of one-tenth of one percent (0.0010) per year for the next 2,100 years.

u) For the proposition that our species could export humans to other celestial bodies in sufficient amount and within the time necessary to prevent a major catastrophe to humankind.

v) Against the proposition that humanity has weapons of mass destruction that are able to destroy all or almost all of humanity.

w) Against the proposition that weapons of mass destruction are presently available to between eight and ten nations.

x) Against the proposition that it is highly likely that additional nations and non-nations will, within the next 50 years, obtain weapons of mass destruction and the ability to deliver them.

y) Against the proposition that population will continue to grow unless low cost or zero cost and medically safe (as safe as medicine can make them) abortions are made available to all of humanity. For the purpose of this sub-paragraph, abortion shall be defined as the termination of a pregnancy prior to the full-term birth of a live child by surgical, chemical, or hormonal means.

z) For the proposition that it is in the best interest of humankind to assume that population growth will voluntarily cease at a level below 9.5 billion and to take no action, overt or otherwise, to insure that happening.

aa) For the proposition that it is in the best interest of humanity to assume that population growth will voluntarily cease prior to the year 2100 and to take no action, overt or otherwise, to insure that happening.

bb) Against the proposition that if the current Arab population of Gaza (assumed to be 1.4 million) continues to grow at its current compound rate of 4.7% per year for the next 60 years, without sizeable emigration, it is highly likely that war with weapons of mass destruction will occur between Israel and the Arabs.

cc) For the proposition that the economic output of the planet can expand by a factor of two, can expand by a factor of four, can expand by a factor of 20, can expand by a factor of 50, can expand to become infinite, if humanity desires to survive for a period of 5,000 years—you set forth how large the economic output of the earth can become and then defend your choice.

dd) Against the proposition that an economy cannot grow over time unless the economy uses something physical.

ee) For the proposition that recycling can be 100% efficient.

ff) Against the proposition that there are two and only two ways population growth can be reduced to zero—violently and non-violently.

gg) Against the proposition that non-violently (as set forth in ff above) can be sub-divided into two and only two sub-categories---by the voluntary action of all of humanity or by coercive population control.

hh) Against the proposition that if any country faced massive social unrest leading to revolution and the collapse of the social order caused by starvation or any lack of resources, that the government of that country would lash out (start a war) against their neighbors (or others) in an attempt to obtain the food or other resources which curb or eliminate the massive social unrest and/or the collapse of the social order.

ii) Against the proposition that current H-bombs have the equivalent destructive power of 12-15 million tons of TNT.

jj) Against the proposition that humanity generally has used the richest and most accessible resources that the earth can provide, and that in the future it will be harder and more expensive to obtain the resources necessary to support the expanding human population, and the resources necessary to keep a modern industrial society functioning.

kk) Against the proposition that even if every nation, religion, group, family, and individual, reduced their population growth today to replacement level, population would continue to grow for a substantial number of years (about 70 or more years), and would stabilize at a level 50% greater than the starting level.

ll) Against the proposition that reproduction is skewed in favor of an increasing population—a man can father almost an infinite number of children, and a woman can have 9, 10 or more children—neither can have minus children.

mm) For the proposition that the rhythm method of birth control demanded by the Catholic Church is an effective method of controlling population growth.

nn) Against the proposition that a substantial number of American women had one or more unplanned pregnancies, and a substantial number had one or more abortions.

oo) Against the proposition that a substantial number of the women in the world had one or more unplanned pregnancies, and one or more abortions.

pp) For the proposition that new technologies and/or environmentalism (no matter how defined) and/or recycling will permit the earth to support 10, 20, 30, 40, or 50 billion (you pick whichever number you want and defend that number) human beings for 5,000 years, without causing resource wars with weapons of mass destruction, or other major catastrophes causing the violent deaths of billions of humans.

qq) For the proposition that the earth could support the present human population of about 7.0 billion (Oct. 2011) without the resources of North and South America.

rr) For the proposition that there are new undiscovered landmasses on the planet that can provide additional resources for humanity.

ss) Against the proposition that there is substantial over fishing, and that a number of fisheries used for human food have collapsed such that those fisheries no longer can provide food for humanity, and that an additional number of fisheries are close to collapse and probably will collapse in the near future such that they likewise will no longer be able to provide food for the human species.

tt) Against the proposition that a number of aquifers which are being used to grow food crops in the US, China and other countries are being severely depleted.

uu) Against the proposition that irrigation can and does lead to soil salinization which reduces and/or destroys the ability of the soil to produce food crops.

vv) Against the proposition that a large portion of the increased food supply of the last century has been due to the use of increased irrigation.

ww) Against the proposition that in order for human population to be stabilized, there has to be a one to one relationship between births and deaths—if more people are born than die, population will increase.

xx) Against the proposition that fossil fuels are finite and at some point in time they will be exhausted as defined herein.

yy) Against the proposition that when oil is exhausted (including oil made from other fossil fuels) all or all most all aviation will no longer be possible.

zz) Against the proposition that when all fossil fuels are exhausted that international trade will substantially decrease.

aaa) Against the proposition that by extending the average life span of human beings, medical science has caused a compound effect—more people live longer, and due to the fact that more people live longer, more people are alive.

bbb) Against the proposition that the average human being's standard of living has gone up over the last 50 years and, therefore, the per capita usage of resources has increased over the last 50 years.

ccc) Against the proposition that the per capita increase in usage of resources has had a further compounding effect when combined with aaa above.

ddd) For the proposition that humanity will voluntarily reduce the birth rate on a world-wide basis such that population growth is reduced to zero (or made negative, if that is necessary) before weapons of mass destruction are used, and will remain at zero as long as humanity inhabits the earth.

eee) Against the proposition that the average per capita usage of resources will continue to increase on a world-wide basis for the foreseeable future.

fff) Against the proposition that humanity now has weapons of mass destruction that probably could eliminate our species in a few short moments of time or, in the alternative, could destroy modern civilization in a few very short moments of time.

ggg) Against the proposition that there are many, many present signs that humankind is destroying the biosphere, thereby putting into peril the future existence of the human species.

hhh) Against the proposition that over the long term, environmentalism does more harm than good to humankind by permitting population to grow, rather than forcing humanity to confront the population problem today.

iii) Against the proposition that global warming, as that term is generally understood, does exist. It doesn't matter for your argument what is causing global warming, merely that the earth appears to be getting warmer and that there is every indication that the warming will continue.

jjj) Against the proposition that if global warming exists and if it continues, there is a strong probability that it will adversely affect the biosphere, and thereby reduce humankind's chances of survival.

kkk) For the proposition that evolution, natural selection, (commonly known as survival of the fittest or Darwinism) is not applicable to humankind and never will apply to humanity.

lll) Against the proposition that artificial birth control methods sometimes fail either because they are not used properly or for other reasons.

mmm) Against the proposition that many artificial birth control methods presently in use are effective after the human female egg has been fertilized.

nnn) Against the proposition that a reduction in world-wide population growth requires the support of the USA.

ooo) Against the proposition that the position of many of the world's largest and most important religions presently make it very difficult to reduce population growth to zero.

ppp) Against the proposition that except for the energy of the sun reaching our planet, our planet is a "closed system".

qqq) Against the proposition that in a closed system, if one aspect of the system increases, a different aspect of the system must decrease.

rrr) Against the proposition that humanity has used the most accessible resources, and in the future it will be more difficult and expensive to obtain and use the resources the earth provides.

sss) Against the proposition that if the aquifers under the central USA and Northern China are depleted such that they can no longer provide the necessary irrigation water to grow crops in those areas, there will be a substantial decrease in the world's food supply.

ttt) Against the proposition that the price of resources will increase, if population continues to grow.

uuu) Against the proposition that in order for humanity to survive at the average current usage of resources for 2,000 years, the population has to be substantially reduced below the current 7.0 billion (Oct. 2011)

vvv) For the proposition that the USA will be able to construct the necessary infrastructure and desalinization facilities to desalinate sea water and transport that water to the grain producing areas of the Midwest, prior to the aquifers that presently supply the water to grow crops in that area running out of water.

www) For the proposition that the Catholic Church will change its position on artificial birth control and abortion prior to a major catastrophe caused by the explosive population growth.

xxx) For the proposition that the religions presently opposed to abortion will change their position prior to a major catastrophe caused by the explosive population growth.

yyy) Against the proposition that there is a relationship between standard of living and the usage of resources—the higher the standard of living of an individual on average, the more resources provided by the earth are used by that individual.

zzz) Against the position that the economy of China is rapidly expanding, and that China will use an expanding proportion of the resources produced by the earth.

aaaa) Against the proposition that the population of India is rapidly expanding.

bbbb) Against the proposition that the economy of India is rapidly expanding, and that India will use an expanding proportion of the resources produced by the earth.

cccc) Against the proposition that the number of automobiles, trucks, planes, ocean going vessels, and other items used by humanity that use fossil fuels will substantially increase in the next 50 years, increasing the demand for oil and other fossil fuels.

dddd) Against the proposition that humans are born with genetic differences.

eeee) Against the proposition that genetic differences are one factor which determines the ability of an individual human being to function in society.

ffff) Against the proposition that it is highly likely that international trade will substantially decrease when fossil fuels are exhausted.

gggg) Against the proposition that in order for humanity to survive on this planet for 5,000 years, the population of humankind must be reduced below the current level of 7.0 billion (Oct. 2011).

hhhh) Against the proposition that if international trade were substantially reduced, it would be very harmful for humanity.

iiii) Against the proposition that if medical science increased the average human life span in good health to 150 years, the only way humanity could survive for any reasonable length of time would be to reduce the number of humans who live on the earth.

jjjj) Against the proposition that the average per capita usage of resources will increase from 2008 to 2050.

kkkk) Against the proposition that the average life expectancy will increase during the period from 2008 to 2050.

llll) Against the proposition that the population of humanity will continue to increase during the period 2008 to 2050.

mmmm) Against the proposition that the increase in population, combined with the increase in average life expectancy, combined with the increase in per capita usage of resources during the period 2008 to 2050, will very substantially increase the burden humanity places on the ability of the earth to provide the resources necessary for humanity to survive for a reasonable length of time.

nnnn) Against the proposition that if, on average, every couple had three children who survived to reproduce, and in the next generation each couple had three children who survived to reproduce, and if this birth/survival rate continued for just 700 years, the population of humanity would exceed the ability of the earth to provide the resources needed for humanity to survive on this planet.

oooo) Against the proposition that if, on average, each couple had 2.4 children who survived to reproduce, and in the next generation each couple had 2.4 children who survived to reproduce, and if this birth/survival rate continued for a few hundred years, resource wars would occur resulting in the deaths of billions of human beings.

pppp) Against the proposition that the combined Greenland and Antarctic ice sheets have enough ice which if completely melted would cause a very substantial increase in the level of the oceans, requiring a massive relocation of hundreds of million of people who would be forced to move to higher ground.

qqqq) Against the proposition that it takes energy to produce electricity and hydrogen.

rrrr) Against the proposition that China intends to obtain a substantial portion of its future energy needs by building a significant number of coal fired power plants.

ssss) Against the proposition that carbon dioxide produced any place on the planet affects every human being on the planet.

tttt) Against the proposition that continued population growth will always offset the benefits of any and all environmental actions taken by humanity.

uuuu) Against the proposition that the harm caused to humanity by a one child policy will be less than the harm to humanity if population and/or economic growth were permitted to continue.

I could go on listing additional propositions for you to consider. However, the purpose for the list above is to require anyone who disagrees with what I have written to be very specific as to the disagreements, and to require that person to set forth facts and logic and not unfounded statements as to why he disagrees. I want this book to be challenged, but challenged on facts and logic and not on flights of fancy. I am including my e-mail address so that any logical reader will be able to contact me jbrent6179@aol.com. Hate mail not wanted. Please do not make the statement that human ingenuity or technology or anything else will solve our problems without facts supporting that statement. Humanity cannot and must not gamble its survival on mere hopes. Yesterday is vastly different from today. The solutions of yesterday are not the solutions of today.

Many cogent arguments have been made on behalf of population stabilization and reduction. But few, if any, advocates have stepped forward with concrete proposals on how that vitally necessary goal can be achieved. And fewer still have taken on organized religion as one of the fatal impediments to that cause. What makes this book and the arguments contained in it different, is that those arguments set forth a method by which the goal of population stabilization and reduction can and will be achieved. The fact that the arguments and method will be discarded by many as cruel and/or unacceptable is less important than the fact that something must be done today to reduce population growth to zero, or make it negative, if humanity is to survive for just a very few years.

No one has the right to use his penis or her womb to destroy all of humanity. There is not a God given right to reproduce, or to reproduce in a manner which results in the total and complete destruction of our species. Every human right is subject to control by society. Even the right to life is not absolute. If an individual commits certain types of heinous crime, society can and will execute him, taking away his life.

The choice is between resource wars with weapons of mass destruction and coercive population control. The failure of the leaders of humanity to understand that simple fact will lead to the total annihilation of humankind. Yes, humanity must strive to make coercive population fair, just, and moral. However, there cannot be a guarantee that coercive population control will be fair in every instance and in every application of the principle, and humanity must understand that fact. However, that must not stop humanity from enforcing coercive population control as the choice is simple—annihilation of our species, or doing the best humanity can to make coercive population fair, just, and moral.

The cowardice of those concerned with overpopulation and the future of humanity to demand coercive population control is inexcusable. Every single person who has written about the ever expanding human population, is betting on the hope that humanity will voluntarily reduce population growth to zero before a tipping point will be reached which will lead to the inevitable destruction of humankind. As set forth above, even if there is a 95% chance that humanity will voluntarily reduce population growth to zero in time to prevent the destruction of our species, the five percent chance that population growth will not be voluntarily reduced to zero in time to prevent the destruction must not be taken. No that is wrong! Even if there is a one percent chance that population growth will not voluntarily be reduced to zero in time to prevent the destruction of humanity, that chance must not be taken.

Every single author who has written about overpopulation (or the growing population) and the future of humanity, who has not endorsed or demanded coercive population control is gambling the survival of all of humanity on the chance, and it is only a chance, that all of humanity will voluntarily reduce population growth to zero before the tipping point is reached. Remember the power of A-bombs and H-bombs and remember the likelihood that many nations, non-national groups, and fanatics, will soon have those weapons and the ability to deliver them to any place on the globe.

Let there be no mistake, when growth stops, as it must, a substantial number of people will be hurt. Let there be no mistake, the termination of growth is the most profound and troubling revolution that humankind has confronted in the past or will ever confront in the future. Since

humanity evolved from the ape, everything humankind has done has been to foster and further growth—more people at a higher standard of living, a longer life, greater usage of natural resources, etc. Suddenly human beings are confronted with devising a moral, just, and fair, system to exist on this planet for a reasonable length of time without growth. A system without growth requires change in every aspect of society—what is moral, how government functions, can democracy survive, what is the function of charity, how will the economy of the world function, who can vote, what is the definition of murder, what is the place of religion, how will medicine affect humanity in the future, and other aspects too numerous to mention--- and that requirement has come about in only the last 50 or so years; a very, very short period of time.

A PROPOSAL AS TO HOW TO DETERMINE WHO CAN AND WHO CANNOT REPRODUCE.

Now to the hard part—to propose a method or to propose criteria by which those who will be permitted to reproduce will be determined. First, any proposal made by me or any other person cannot be value neutral. Any decision made by any human cannot be value neutral. Even asking a question or establishing criteria cannot be value neutral. Everything a human being does, says or writes cannot be value neutral. Second, any proposal I set forth herein is just that, a proposal. There should be and there will be many people that disagree with my proposal. I urge those individuals to present intelligent alternative proposals. I ask those individuals to state why they disagree with my proposal and what facts and logic make their proposals better for humankind.

With the understanding that nothing created by a human being can be value neutral, I will propose a method to divide humanity into two groups, the reproducers and the non-reproducers. That proposal is as value neutral and as fair and just as I can think of. As indicated previously, the division into the two groups will not be made for many years. As indicated previously, the first step is to limit reproduction for everyone to one child. Only after population has been substantially reduced will the remaining population be divided into the two mentioned groups.

Among the criteria I considered are:

- a) The method should not change at any time in the future, since such a change would be subject to human whim.
- b) The method should be simple—easy to understand.
- c) The method should be realistic—one that has a chance of working.

d) The method should be self correcting—if a person without the skills to function is permitted to reproduce in this generation and his offspring do not have the skills to function in the next generation, then the system should prevent their reproduction in the next generation.

e) The determination of who has the skills necessary to function in society should not be made by a human being or by any group of humans---it should be determined automatically.

f) The method should attempt to cover the situation in which the necessary skills change, and they do change, so that those who were permitted to reproduce under one set of skills are no longer permitted to reproduce under a different of skills.

g) The method must take into consideration that in some cases the children of able men/women do not have the skills of their parents and should not be permitted to procreate. And yet, it must be understood that there is a genetic component to almost all skills and to almost every aspect of the human condition.

h) The determination cannot be made by any test created by a human being or group of humans, such as an Intelligence Test (IQ test).

i) The method must take into account that a myriad of factors determine who has the necessary skills to function.

j) The method must take into account that the skills necessary to function vary according to the local society in which the skills and individual exists and that there are many local societies on this planet, and yet in many ways there is one global society.

Let me make it absolutely clear that the concept of dividing humanity into two groups is not a scheme to establish the “master race” based on race, religion, national origin, language or anything of that type. The reader must understand that the concept of dividing humanity into two groups is a concept that I detest and goes against every democratic principle known to humankind. However, for the reasons set forth in this book, it is absolutely necessary to divide humanity into the two groups in order for species to survive.

If a child or anyone were permitted to inherit or receive gifts it would mean that the right to procreate would not be based on the individual’s ability to function, but would be based, in part, on the ability of that individual’s parents or benefactors to function. No matter the method chosen to determine who could procreate, a child of Bill Gates if he/she were permitted to inherit or receive gifts, would always have an advantage over a child of the ghetto or a child from the slums of India, even though the child of the ghetto or the child from the slums of India had better skills to function.

The permits would be issued to those who paid the highest amount of money for the right to procreate—a bidding process. At this point I am

sure that you, the reader, are starting to scream that the author is a crazy, immoral madman. How dare the author take the position that money is to be the factor that determines the future of humanity? The answer is quite simple---generally those who are the most productive, the most able to function in society, make the most money. Of course, I know that there are thousands, if not millions, of exceptions to the general rule. However, there is a correlation between the ability of the individual to function in society and the benefits an individual brings to society and the money earned by that individual. I know that using money as the factor which determines the future of humanity is unfair to those who live in the poorest countries. Hopefully by the time humanity needs to be divided into two groups the economic differences between the affluent West and the rest of the world will be reduced.

How about Mike Tyson, the fighter who made more money in one fight than most intelligent and able people will make in their entire lives? In this generation he would have the right to reproduce. However, the system is self-correcting. In the next generation and/or in future generations, hopefully, the sport of boxing would be less attended and the fighters would earn less money so that their reproduction rate would decrease. If the people continued to attend the sport of boxing so that the future Mike Tysons made the most money, then society in its wisdom would have made the choice of who can and who cannot reproduce.

Let us look at the opposite side of the coin. Most composers of symphonies aren't well paid and would not reproduce under the bidding system. If humanity wanted beautiful symphonies it would have to pay the composers more---the decision would be made by society as a whole. If humanity wanted better teachers and professors it would have to pay them more. To put it in simple terms---humanity/society would determine its future by its acts and hopefully those acts would be made on a rational basis.

The method that I am proposing is based on the assumption that there is a genetic component to the ability to function in society, and a genetic component to the ability to provide benefits to society. Since life began on the earth there always has been a genetic component to survival and reproduction of every living thing. However, as indicated above, I am aware that many men/women of genius and greatness had fools and incompetents for children. I am also aware that many fools and incompetents had geniuses for children. And lastly, I am aware that it takes nature many, many, generations to determine the fittest within a species. Since the method proposed is self correcting, those incompetents will not be able to reproduce in the next generation. The entire system must be constructed such that reproduction is determined based on the ability of the individual, no one else. The right to reproduce cannot be

based on the ability of parents, grandparents, friends or anyone else. The process will be continuous and never ending---as the skills needed to function in society change, those who are permitted to reproduce will change.

Admittedly the method cannot and will not be 100% fair even if a child cannot receive gifts or inherit. For example---a ten-year old child of wealthy parents could travel with his/her parents around the world and he would, therefore, have an advantage over a child of poor parents. Another example---a child of a professional couple would hear his/her parents talk at home and that fact alone would give that child an advantage over another child. Access to education would have to be determined by the individual's ability and nothing else.

An important question that must be considered—why would a person of ability/genius work and create and thereby produce benefits for society as a whole, when that person could not leave the assets he/she acquired to his/her child? Another very important question---why would a wealthy parent in the industrialized world permit a system to exist which requires his child to compete with a child from the slums of India for the right to reproduce? In reality there aren't any satisfactory answers to those two questions. And yet the ultimate fact is that population growth must be made negative, if humanity wants to survive, and a method or system must be created which permits and causes that to happen.

I will try to provide answers to the two questions I set forth above. A person of ability will work and create because he/she must—it is a part of his/her nature. If a wealthy person does not agree to a system that requires his/her child to compete with a child from the slums of India, Africa or anywhere else, eventually the slum child who is more competent will become a revolutionary and attack and kill the less competent child of the wealthy person. Any attempt by the wealthy to forever keep in chains and bondage the competent children of the ghettos and slums of the world is doomed to failure.

Professor David Pimental, of Cornell University and his wife, Marcia Pimental, also of Cornell University, in an article they wrote in 2003, reached exactly the same conclusion that is reached in this book in so far as it describes the results of the growing human population---“If the human population continues to increase and exhaust the earth's natural resources, nature will control our numbers by disease, hunger, malnutrition and violent conflicts over resources. The difficult decisions are ours to be made to prevent the imbalance between human numbers and food security from further escalating.”

I don't want to mislead the reader---in the article referred to above and in their other writings they never referred to coercive population control or dividing humanity into two groups. Professor Pimentel and his wife failed to set forth the method by which population growth will be reduced to zero, or made negative if that were necessary for the survival of humanity. To the best of my knowledge, no one who has written about the relationship between the growing population and the survival of humanity has set forth a method by which population growth will be controlled. Rather, all of those who have written on the subject have impliedly/assumed, without any basis whatsoever, that all of humanity would have the intelligence and desire to voluntarily control population growth such that humanity survives.

The difference between this book and others that were written on the subject is that this author is setting forth the only method by which population growth will be controlled. To the best of my knowledge, no author has evaluated or considered the methods by which population growth could be controlled and/or made recommendation to humanity as to which method to use.

To repeat what is written above, there are three and only three ways population growth will be made negative such there is a reduction in the number of humans on the earth---a) death and destruction caused by resource wars and the other horrors set forth herein after humanity has equaled or exceeded the carrying capacity of the planet; b) the voluntary action of all of humanity (every group, religion, nation, family, etc.), to reduce population growth before humanity has exceeded the carrying capacity of the planet, and this voluntary action must last as long as the human species inhabits the earth; or c) by coercive population control before humanity has exceeded the carrying capacity of the planet.

And remember that the carrying capacity of the Earth most likely will not be a fixed level for an extended period of time. Most likely the carrying capacity of the Earth will continue to decrease as humanity uses up the non-renewable resources of the Earth.

Humanity cannot permit the first manner of limiting population growth to occur---it will probably destroy our entire species and/or destroy civilization. The second choice will not be achieved by humankind. Not everyone will agree to voluntary control and even if they did, the action of all of humanity will not last as long as our species inhabits this planet. The only way we can save ourselves is to have population control imposed on humanity.

Again, to repeat what has been written above there are two and only two times at which population growth can be controlled---1) before birth by

artificial birth control and abortion or 2) after birth by war, disease, starvation, and other horrors.

If population is not controlled before birth, it will continue to grow until humanity has exceeded the carrying capacity of the Earth, and that will result in war, disease, starvation, and other horrors. Since no nation has ever controlled its population without abortion, humanity has a choice--abortion or the horrible deaths of billions. Humanity will murder billions and billions of our species and nothing humankind can do will prevent those murders. Those murders will occur before birth of potential human beings by abortion or after birth of living breathing human beings. The choice is ours to make.

While many others, in addition to myself, have clearly stated the horrors that face humanity if population growth were to continue, those horrors have not registered in the collective psyche of humanity. Any minimally intelligent person who reads newspapers, magazines, books, watches TV, listens to the radio, or in any other way becomes aware of the problems facing humanity today should be frightened by those problems and should be open to considering any method which will solve those problems so humanity can survive. And, as indicated above, every one of the major problems facing humanity today is in some way caused by or exacerbated by the level of population today, and the projected the level of population in the future.

Not only will religious dogmatists, zealots, and anti-abortionists, be horrified by what is written in this book, it is highly likely that those in favor of reducing population growth to zero will also be horrified because they will believe what is contained herein is too radical and will bring the entire population control movement into disrepute. I can only challenge them to cast aside their emotional reactions and respond with a reasoned refutation. I would ask---“Precisely what misstatement of fact or fallacy of logic can you locate in my arguments?” Does any conclusion or statement contained herein not logically follow from the facts contained herein? If anyone opposed to the conclusions reached in this book, or any reviewer or other reader, cannot point to a factual error or failure of logic, then the conclusions reached herein are not radical, but merely they are disagreeable to convention and the current view of morality and justice.

If you, the reader, are interested in the future of humanity, you have three intellectual choices:

1. Show that the human population can continue to grow forever.
2. Show that all of humanity will voluntarily reduce population growth to zero or make it negative, and then stabilize population at a level that the earth can support for an extended period of time. Or even a more difficult

choice-- show that humanity will voluntarily and continuously reduce the population, as that continuous reduction will be necessary due to the continuous reduction in the resources that the Earth can provide to our species.

3. Establish a method of coercive population control that will prevent the destruction of humanity caused by the growing population, or even a stabilized population.

There are no other choices. If you cannot defend choices numbered 1 or 2 then you must accept choice number 3. If you don't like the method I have set forth above to control population by coercion, propose an alternative method.

Let me summarize the problem facing humankind in a slightly different manner. What will happen when humanity exceeds the carrying capacity of the earth? Something must happen. By definition, if the carrying capacity of the earth is 100 human beings and there are 250 human beings on the earth, something must happen. How will society function when the population equals or exceeds the carrying capacity of the earth? What action must humanity take today to prevent the destruction of humanity when the human population exceeds the carrying capacity of the earth? These questions would not have to be answered by humanity if the human population never, repeat never, exceeds the carrying capacity of the earth. These questions will have to be answered today or sometime in the future when humanity exceeds the carrying capacity of the earth.

There are two and only two ways that the number of human beings will never exceed the carrying capacity of the earth---a) if the carrying capacity of the earth is infinitely large; or b) if humanity forever keeps the population of humanity below the carrying capacity of the earth. And the carrying capacity of the earth cannot be infinitely large. The earth cannot support an infinitely large human population no matter what humanity does and no matter the intelligence of humanity. In effect, there is only one way for humanity to never exceed the carrying capacity of the earth, and that is to control population growth. And there are only two ways to do that---by the voluntary action of all of humanity forever, or to have the growth of population controlled by some mechanism that enforces limits on reproduction.

If you are an intellectually honest reader, no matter how much you disagree with what I have written or detest my proposals, you must answer the questions set forth or show that the analysis is incorrect. Since voluntary population control will not prevent humanity from exceeding the carrying capacity of our planet, humanity must face the

horrible choice and face it today, not tomorrow, -----coercive/imposed population control, or the destruction of our species.

THE LEADERS OF HUMANITY BY THEIR INACTION WILL KILL BILLIONS OF HUMANS

Since not one single leader of humanity has ever stated that economic growth must cease and taken steps to stop economic growth, humanity is doomed to destruction. Once economic growth ceases, population growth must cease. Population growth cannot continue for even a short period of time without economic growth. Since every leader of humanity (without a single exception) has refused to embrace coercive population control, every leader of humanity is gambling that voluntary population control will prevent the destruction of humanity. No leader of humanity has ever prepared a detailed analysis of the risks and benefits of voluntary population control versus the risks and benefits of coercive population control. Every leader is making that gamble without an intelligent analysis of the risks of that gamble.

Every successful businessman, every successful military leader and every intelligent human being attempts to look into the future to evaluate and plan for contingencies that the future may hold. Not one leader of humanity has ever considered the possibility/contingency that the earth cannot provide the resources for the current level of population to exist for even a very short period of time. No leader of humanity has ever prepared contingency plans as to how his government/society or all of humanity would function if the level of economic activity would have to be reduced in order for humanity to survive for even a short period of time. Any leader who believes such evaluation and planning is absolutely unnecessary is failing in his duty. The failure to prepare such contingency plans is an act of criminal negligence and every leader has committed and is presently committing criminal negligence. No leader of humanity has ever understood the fact that economic and population growth must cease. When it ceases, every aspect of society must and will change—the concepts of charity, religion, government, morality, justice, and many others will change.

In simple terms, the purpose of this book is to cause you the reader to become an independent thinker and to pressure the leaders of humanity to take the necessary steps to prevent the horrible destruction of our species. You have three choices:

1. Present credible evidence that the facts, math and logic presented in the book are wrong. Present credible evidence that the conclusions and proposals set forth in this book are not supported by the math, facts and logic, or present different conclusions and one or more different proposals (your proposals) as to how to reduce population growth to zero

and/or make it negative. In effect, present credible evidence that the author is just plain wrong and has no knowledge of the problems facing humanity and their solutions.

2. If you are unable to present credible evidence that the author is wrong, then you are obligated to come to the same conclusions as the author, and to implement his proposals as how to reduce population.

3. If you are unable to present credible evidence that the author is wrong, or present a very strong argument that the conclusions of the author are not supported by the evidence he presented, or present a strong argument for a different method of controlling population and you are unwilling to adopt his proposals for controlling population; then you must be prepared to accept the consequences—massive and horrible deaths of billions of living breathing human beings.

There are no other choices!

Exhibits, Tables and Statistics

Exhibit #1 International Data Base - Total Midyear Population for the World: 1950-2050

Year	Population	Annual Growth Rate (%)	Annual Population Change
1950	2,556,506,575	1.461	37,351,348
1951	2,593,857,923	1.614	41,876,022
1952	2,635,733,945	1.720	45,327,617
1953	2,681,061,562	1.799	48,224,291
1954	2,729,285,853	1.902	51,923,114
1955	2,781,208,967	1.915	53,256,185
1956	2,834,465,152	1.979	56,107,849
1957	2,890,573,001	1.967	56,849,272
1958	2,947,422,273	1.786	52,650,382
1959	3,000,072,655	1.412	42,373,103
1960	3,042,445,758	1.350	41,063,197
1961	3,083,508,955	1.823	56,214,577
1962	3,139,723,532	2.224	69,812,374
1963	3,209,535,906	2.226	71,443,536
1964	3,280,979,442	2.111	69,270,572
1965	3,350,250,014	2.098	70,297,719
1966	3,420,547,733	2.039	69,745,501
1967	3,490,293,234	2.065	72,065,397
1968	3,562,358,631	2.103	74,923,258
1969	3,637,281,889	2.081	75,687,612
1970	3,712,969,501	2.098	77,893,083
1971	3,790,862,584	2.019	76,535,972
1972	3,867,398,556	1.962	75,872,870
1973	3,943,271,426	1.894	74,672,577
1974	4,017,944,003	1.808	72,642,148
1975	4,090,586,151	1.742	71,275,288
1976	4,161,861,439	1.731	72,058,442
1977	4,233,919,881	1.704	72,148,981
1978	4,306,068,862	1.742	75,006,799
1979	4,381,075,661	1.653	72,398,249
1980	4,453,473,910	1.861	82,869,936
1981	4,536,343,846	1.765	80,062,851
1982	4,616,406,697	1.758	81,158,886
1983	4,697,565,583	1.709	80,268,941
1984	4,777,834,524	1.709	81,676,158
1985	4,859,510,682	1.727	83,938,208
1986	4,943,448,890	1.748	86,434,375
1987	5,029,883,265	1.732	87,101,315
1988	5,116,984,580	1.695	86,754,310
1989	5,203,738,890	1.679	87,363,581
1990	5,291,102,471	1.569	83,009,675
1991	5,374,112,146	1.580	84,931,873
1992	5,459,044,019	1.509	82,397,753
1993	5,541,441,772	1.460	80,917,752
1994	5,622,359,524	1.442	81,096,540
1995	5,703,456,064	1.410	80,390,467
1996	5,783,846,531	1.363	78,805,764
1997	5,862,652,295	1.329	77,928,399
1998	5,940,580,694	1.302	77,332,089
1999	6,017,912,783	1.275	76,756,788

Year	Population	Annual Growth Rate (%)	Annual Population Change
2000	6,094,669,571	1.267	77,234,911
2001	6,171,904,482	1.250	77,149,464
2002	6,249,053,946	1.227	76,689,165
2003	6,325,743,111	1.217	76,974,496
2004	6,402,717,607	1.206	77,244,677
2005	6,479,962,284	1.205	78,104,045
2006	6,558,066,329	1.201	78,760,188
2007	6,636,826,517	1.181	78,380,750
2008	6,715,207,267	1.157	77,685,704
2009	6,792,892,971	1.113	75,635,235
2010	6,868,528,206	1.129	77,515,783
2011	6,946,043,989	1.113	77,280,910
2012	7,023,324,899	1.098	77,089,232
2013	7,100,414,131	1.087	77,154,721
2014	7,177,568,852	1.073	76,980,858
2015	7,254,549,710	1.057	76,686,887
2016	7,331,236,597	1.041	76,297,840
2017	7,407,534,437	1.022	75,689,242
2018	7,483,223,679	1.001	74,943,986
2019	7,558,167,665	0.980	74,079,630
2020	7,632,247,295	0.960	73,265,807
2021	7,705,513,102	0.941	72,480,658
2022	7,777,993,760	0.920	71,575,895
2023	7,849,569,655	0.899	70,593,318
2024	7,920,162,973	0.878	69,553,084
2025	7,989,716,057	0.859	68,599,042
2026	8,058,315,099	0.840	67,708,827
2027	8,126,023,926	0.822	66,763,598
2028	8,192,787,524	0.803	65,799,665
2029	8,258,587,189	0.785	64,818,826
2030	8,323,406,015	0.768	63,907,016
2031	8,387,313,031	0.752	63,067,640
2032	8,450,380,671	0.736	62,224,320
2033	8,512,604,991	0.721	61,369,024
2034	8,573,974,015	0.705	60,486,569
2035	8,634,460,584	0.691	59,647,049
2036	8,694,107,633	0.677	58,857,352
2037	8,752,964,985	0.663	58,048,881
2038	8,811,013,866	0.649	57,214,973
2039	8,868,228,839	0.635	56,350,833
2040	8,924,579,672	0.622	55,513,567
2041	8,980,093,239	0.609	54,709,644
2042	9,034,802,883	0.596	53,874,690
2043	9,088,677,573	0.583	53,002,553
2044	9,141,680,126	0.570	52,100,825
2045	9,193,780,951	0.557	51,222,818
2046	9,245,003,769	0.545	50,367,070
2047	9,295,370,839	0.532	49,485,066
2048	9,344,855,905	0.520	48,581,527
2049	9,393,437,432	0.507	47,663,651
2050	9,441,101,083		

International Data Base World Population by Age and Sex

Select a year

Year

2050

For more options and additional regions, see the [Data Tables by Region for Population by Age and Sex](#).

Submit

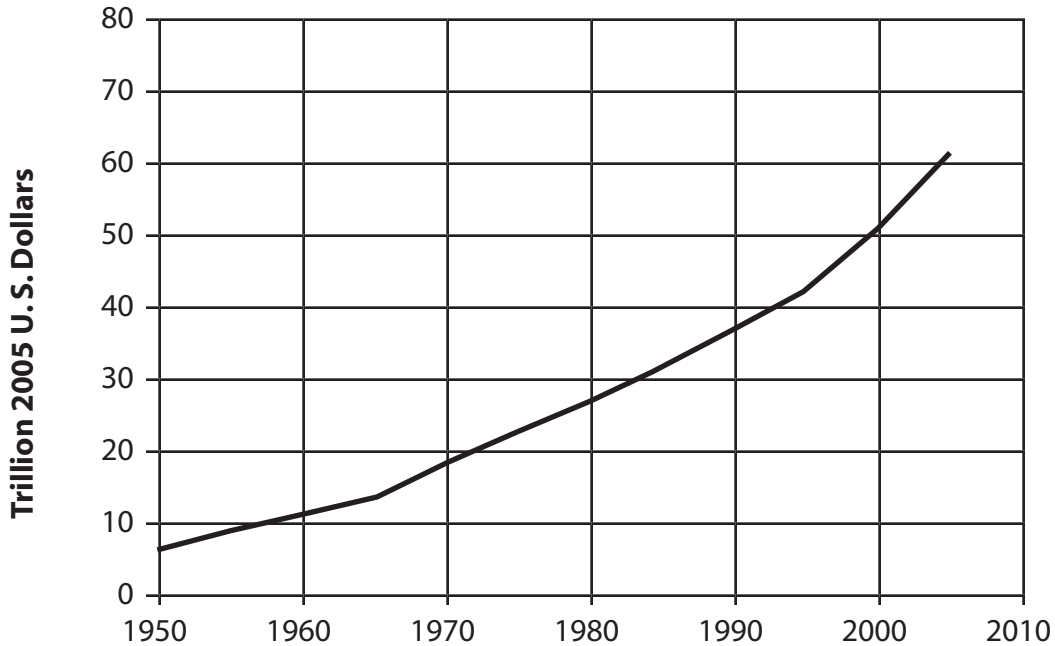
World Midyear Population by Age and Sex for 2050

Age	Both Sexes Population	Male Population	Female Population	Sex Ratio
Total	9,441,101,083	4,709,703,545	4,731,397,538	99.5
0-4	665,577,049	340,122,877	325,454,172	104.5
5-9	658,195,432	336,176,849	322,018,583	104.4
10-14	649,552,215	331,627,534	317,924,681	104.3
15-19	639,969,985	326,629,978	313,340,007	104.2
20-24	632,842,979	322,795,236	310,047,743	104.1
25-29	630,550,623	321,715,244	308,835,379	104.2
30-34	627,023,654	320,511,467	306,512,187	104.6
35-39	615,536,275	315,358,346	300,177,929	105.1
40-44	592,032,576	303,595,888	288,436,688	105.3
45-49	567,207,468	290,477,637	276,729,831	105.0
50-54	549,021,223	279,775,721	269,245,502	103.9
55-59	535,277,780	269,827,390	265,450,390	101.6
60-64	515,733,113	255,397,465	260,335,648	98.1
65-69	441,805,011	213,780,415	228,024,596	93.8
70-74	367,075,801	172,508,117	194,567,684	88.7
75-79	306,395,198	137,842,803	168,552,395	81.8
80-84	223,912,076	94,278,940	129,633,136	72.7
85-89	133,501,721	50,445,244	83,056,477	60.7
90-94	61,291,299	19,814,878	41,476,421	47.8
95-99	22,446,347	5,840,551	16,605,796	35.2
100 +	6,153,258	1,180,965	4,972,293	23.8

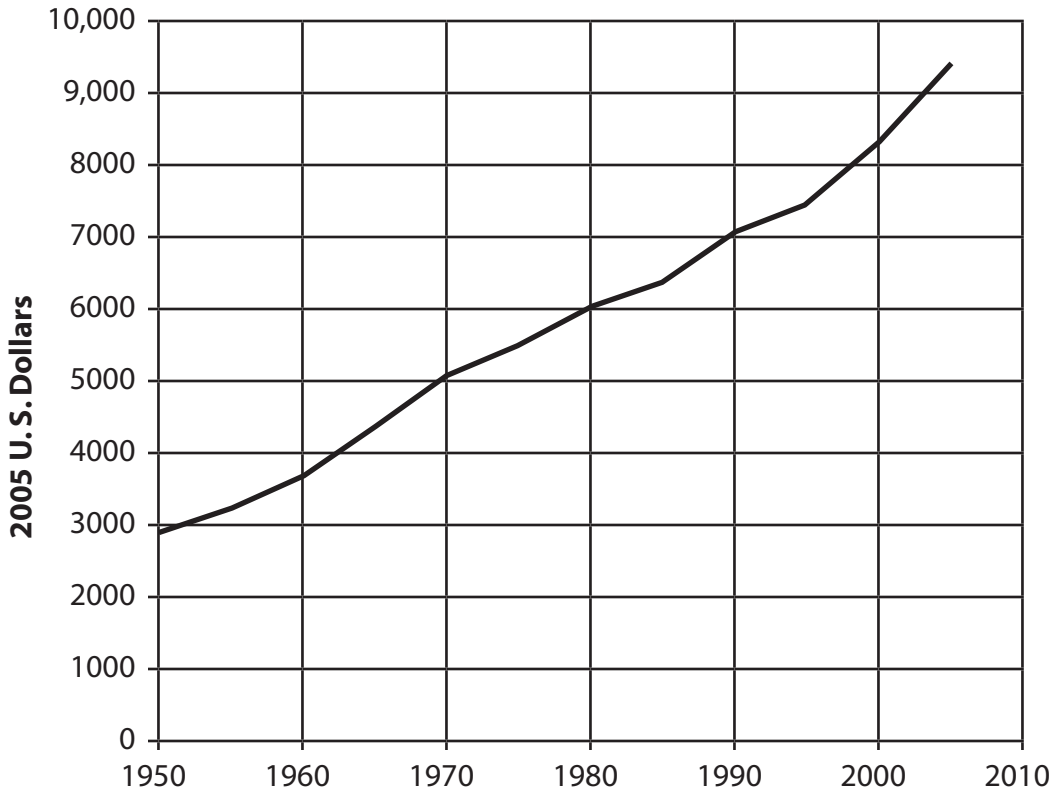
Source: US Census Bureau International Data Base
www.census.gov/population/international/data/idb/worldpop.php

Exhibit #3

Gross World Product, 1950-2005



Gross World Product Per Person, 1950-2005



Source: Compiled by Earth Policy Institute with 1950-1979 from Worldwatch Institute, *Signposts 2001*, CD-Rom (Washington, DC: 2001) (Worldwatch update of Angus Maddison, *Monitoring the World Economy 1820-1992* (Paris: OECD, 1995)); 1980-2005 from International Monetary Fund, *World Economic Outlook Database*, at www.imf.org/external/pubs/ft/weo/2006/02/data/index.htm, updated September 2006; United Nations, *World Population Prospects: The 2004 Revision* (New York: 2005); U.S. Commerce Department, Bureau of Economic Analysis, "Implicit Price Deflators for Gross Domestic Product," Table 1.1.9, revised 30 August 2006, at www.bea.gov.

Country Rankings

Find the largest [countries and areas](#) for any year in the database.

Select a year and rank

Year

Rank All Top 100 Top 50 Top 10 Countries

Countries and Areas Ranked by Population: 2009

RANK	COUNTRY OR AREA	POPULATION
1	China	1,323,591,583
2	India	1,156,897,766
3	United States	307,006,550
4	Indonesia	240,271,522
5	Brazil	198,739,269
6	Pakistan	181,457,277
7	Bangladesh	153,700,334
8	Nigeria	149,229,090
9	Russia	140,041,247
10	Japan	127,078,679

Country Rankings

Find the largest [countries and areas](#) for any year in the database.

Select a year and rank

Year

Rank All Top 100 Top 50 Top 10 Countries

Countries and Areas Ranked by Population: 2050

RANK	COUNTRY OR AREA	POPULATION
1	India	1,656,553,632
2	China	1,303,723,332
3	United States	439,010,253
4	Indonesia	313,020,847
5	Pakistan	290,847,790
6	Ethiopia	278,283,137
7	Nigeria	264,262,405
8	Brazil	260,692,493
9	Bangladesh	250,155,274
10	Philippines	171,964,187

Exhibit #5

2002-2008 World Population Statistics

Rank	Country	2008 Population	2002 Population	2002-2008 Growth	Land Area (sq km)	Density per sq km
1	China	1,330,045,000	1,284,303,705	3.56%	9596960	138.6
2	India	1,147,996,000	1,045,845,226	9.77%	3287590	349.2
3	United States of America	303,825,000	280,562,489	8.29%	9629091	31.6
4	Indonesia	237,512,000	231,328,092	2.67%	1919440	123.7
5	Brazil	191,909,000	176,029,560	9.02%	8511965	22.5
6	Pakistan	167,762,000	147,663,429	13.61%	803940	208.7
7	Bangladesh	153,547,000	133,376,684	15.12%	144000	1066.3
8	Russia	140,702,000	144,978,573	-2.95%	17075200	8.2
9	Nigeria	138,283,000	129,934,911	6.42%	923768	149.7
10	Japan	127,288,000	126,974,628	0.25%	377835	336.9
11	Mexico	109,955,000	103,400,165	6.34%	1972550	55.7
12	Philippines	92,681,000	84,525,639	9.65%	300000	308.9
13	Vietnam	86,117,000	81,098,416	6.19%	329560	261.3
14	Germany	82,370,000	83,251,851	-1.06%	357021	230.7
15	Egypt	81,714,000	70,712,345	15.56%	1001450	81.6
16	Ethiopia	78,254,000	67,673,031	15.64%	1127127	69.4
17	Turkey	71,893,000	67,308,928	6.81%	780580	92.1
18	Congo (Dem. Rep.)	66,515,000	55,225,478	20.44%	2345410	28.4
19	Iran	65,875,000	66,622,704	-1.12%	1648000	40.0
20	Thailand	65,493,000	62,354,402	5.03%	514000	127.4
21	France	62,100,000	59,765,983	3.91%	547030	113.5
22	Great Britain & No. Ireland	60,944,000	59,778,002	1.95%	244820	248.9
23	Italy	58,145,000	57,715,625	0.74%	301230	193.0
24	Korea (South)	49,233,000	48,324,000	1.88%	98480	499.9
25	Burma (Myanmar)	47,758,000	42,238,224	13.07%	678500	70.4
26	Ukraine	45,994,000	48,396,470	-4.96%	603700	76.2
27	Colombia	45,014,000	41,008,227	9.77%	1138910	39.5
28	South Africa	43,786,000	43,647,658	0.32%	1219912	35.9
29	Argentina	40,677,000	37,812,817	7.57%	2766890	14.7
30	Spain	40,491,000	40,077,100	1.03%	504782	80.2
31	Sudan	40,218,000	37,090,298	8.43%	2505810	16.0
32	Tanzania	40,213,000	37,187,939	8.13%	945087	42.5
33	Poland	38,501,000	38,625,478	-0.32%	312685	123.1
34	Kenya	37,954,000	31,138,735	21.89%	582650	65.1
35	Morocco	34,343,000	31,167,783	10.19%	446550	76.9
36	Algeria	33,770,000	32,277,942	4.62%	2381740	14.2
37	Canada	33,213,000	31,902,268	4.11%	9976140	3.3
38	Afghanistan	32,738,000	27,755,775	17.95%	647500	50.6
39	Uganda	31,368,000	24,699,073	27.00%	236040	132.9
40	Nepal	29,519,000	25,873,917	14.09%	140800	209.7
41	Peru	29,181,000	27,949,639	4.41%	1285220	22.7
42	Uzbekistan	28,268,000	25,563,441	10.58%	447400	63.2
43	Iraq	28,221,000	24,001,816	17.58%	437072	64.6
44	Saudi Arabia	28,161,000	23,513,330	19.77%	1960582	14.4
45	Venezuela	26,415,000	24,287,670	8.76%	912050	29.0
46	Malaysia	25,274,000	22,662,365	11.52%	329750	76.6
47	Korea (North)	23,479,000	22,224,195	5.65%	120540	194.8
48	Ghana	23,383,000	20,244,154	15.50%	239460	97.6
49	Yemen	23,013,000	18,701,257	23.06%	527970	43.6

Exhibit #5, Continued
2002-2008 World Population Statistics

50	Taiwan (Rep. of China)	22,921,000	22,548,009	1.65%	35980	637.0
51	Romania	22,247,000	22,317,730	-0.32%	237500	93.7
52	Mozambique	21,285,000	19,607,519	8.56%	801590	26.6
53	Sri Lanka	21,129,000	19,576,783	7.93%	65610	322.0
54	Australia	20,601,000	19,546,792	5.39%	7686850	2.7
55	Madagascar	20,043,000	16,473,477	21.67%	587040	34.1
56	Syria	19,748,000	17,155,814	15.11%	185180	106.6
57	Cameroon	18,468,000	16,184,748	14.11%	475440	38.8
58	Cote d'Ivoire	18,373,000	16,804,784	9.33%	322460	57.0
59	Netherlands	16,645,000	16,067,754	3.59%	41526	400.8
60	Chile	16,454,000	15,498,930	6.16%	756950	21.7
61	Kazakhstan	15,341,000	16,741,519	-8.37%	2717300	5.6
62	Burkina Faso	15,265,000	12,603,185	21.12%	274200	55.7
63	Cambodia	14,242,000	12,775,324	11.48%	181040	78.7
64	Malawi	13,932,000	10,701,824	30.18%	118480	117.6
65	Ecuador	13,928,000	13,447,494	3.57%	283560	49.1
66	Niger	13,273,000	10,639,744	24.75%	1267000	10.5
67	Guatemala	13,002,000	13,314,079	-2.34%	108890	119.4
68	Senegal	12,853,000	10,589,571	21.37%	196190	65.5
69	Angola	12,531,000	10,593,171	18.29%	1246700	10.1
70	Zimbabwe	12,383,000	11,376,676	8.85%	390580	31.7
71	Mali	12,324,000	11,340,480	8.67%	1240000	9.9
72	Zambia	11,670,000	9,959,037	17.18%	752614	15.5
73	Cuba	11,424,000	11,224,321	1.78%	110860	103.0
74	Greece	10,723,000	10,645,343	0.73%	131940	81.3
75	Portugal	10,677,000	10,084,245	5.88%	92391	115.6
76	Belgium	10,404,000	10,274,595	1.26%	30510	341.0
77	Tunisia	10,384,000	9,815,644	5.79%	163610	63.5
78	Czech Republic	10,221,000	10,256,760	-0.35%	78866	129.6
79	Guinea	10,211,000	7,775,065	31.33%	245857	41.5
80	Rwanda	10,186,000	7,398,074	37.68%	26338	386.7
81	Serbia	10,159,000	7,498,001	35.49%	102350	99.3
82	Chad	10,111,000	8,997,237	12.38%	1284000	7.9
83	Hungary	9,931,000	10,075,034	-1.43%	93030	106.8
84	Belarus	9,686,000	10,335,382	-6.28%	207600	46.7
85	Somalia	9,559,000	7,753,310	23.29%	637657	15.0
86	Dominican Republic	9,507,000	8,721,594	9.01%	48730	195.1
87	Bolivia	9,248,000	8,445,134	9.51%	1098580	8.4
88	Sweden	9,045,000	8,876,744	1.90%	449964	20.1
89	Haiti	8,925,000	7,063,722	26.35%	27750	321.6
90	Burundi	8,691,000	6,373,002	36.37%	27830	312.3
91	Benin	8,295,000	6,787,625	22.21%	112620	73.7
92	Austria	8,206,000	8,169,929	0.44%	83858	97.9
93	Azerbaijan	8,178,000	7,798,497	4.87%	86600	94.4
94	Honduras	7,639,000	6,560,608	16.44%	112090	68.2
95	Switzerland	7,582,000	7,301,994	3.83%	41290	183.6
96	Bulgaria	7,263,000	7,621,337	-4.70%	110910	65.5
97	Tajikistan	7,212,000	6,719,567	7.33%	143100	50.4
98	Israel	7,112,000	6,029,529	17.95%	20770	342.4
99	El Salvador	7,066,000	6,353,681	11.21%	21040	335.8
100	Hong Kong	7,019,000	7,303,334	-3.89%	1092	6427.7

Source: Mongabay.com, CIA Factsheet http://www.mongabay.com/igapo/world_statistics_by_pop.htm

Exhibit #6

US = United States of America

NNR = Nonrenewable natural resources

REM = Rare earth minerals

USGS = United States Geological Survey

PGM = Platinum group metals

The US currently imports some quantity of 46 of the 58 analyzed NNRs--- including 100% of our bauxite, 32% of our copper, 100% of our manganese, 33% of our nickel, 62% of our oil, 91% of our platinum group metals, 81% of our potash, 100% of our rare earth minerals, 80% of our tin, and 73% of our zinc.

US IMPORT PERCENTAGE

1 % - 20%	cement, lime, natural gas, phosphate rock, salt
21% - 40%	bromine, copper, garnet, nickel, sulfur
41% - 60%	antimony, arsenic, bauxite, bismuth, cobalt, diamonds fluorspar, gallium, germanium, graphite, indium, manganese, niobium, PGM, rhenium, strontium, tantalum, thallium, vanadium
Other	hafnium, selenium (since the US does not produce any of these two elements, probably 100% are imported)

The bottom line: if we had to rely exclusively upon domestic NNRs to enable our way of life, our attainable population level and material living standards would only be small fractions of their current levels--- and they would be declining continuously.

Remaining Global NNR Reserves

“Years to Exhaustion” is the period of time over which proven global reserves associated with an NNR will last, assuming continued annual production growth at the 21st century rate. While no NNR will ever deplete completely to exhaustion, much less at a constant annual growth rate, this indicator is a convenient benchmark for assessing the adequacy associated with remaining global NNR reserves.

If 21st century annual NNR production growth rates are maintained going forward, proven global reserves associated with 31 of the analyzed NNRs will exhaust within the next 40 years--- including bauxite in 40 years, coal in 35 years, copper in 26 years, iron ore in 22 years, molybdenum in 21 years, natural gas in 36 years, nickel in 28 years, oil in 32 years, tin in 15 years, and zinc in 14 years.

Remaining Global NNR Reserves Years Until Exhaustion

1-10 years	lithium
11-25 years	antimony, arsenic, barite, cadmium, fluorspar, gold, iron ore, lead, manganese, molybdenum, niobium, rhenium, silver, strontium, tin, zinc, zirconium
26-40 years	bauxite, bismuth, coal, cobalt, copper, garnet, graphite, natural gas, nickel, oil, thallium. titanium, tungsten
41-60 years	boron, magnesium, mercury, phosphate rock, PGM, selenium, vanadium

insufficient USGS data aluminum, beryllium, chromium, diamonds, gallium, germanium, hafnium, indium, nitrogen, silicon, sulfur, tantalum

Barring significant new NNR discoveries and/or technological advances that greatly increase the recoverable percentages associated with NNR deposits, available supplies associated with many NNRs will be insufficient in the not-too-distant future to enable existing global economic activity levels, much less continuously robust economic growth. Annual NNR production levels at pre-recession 21st century growth rates, upon which our thriving global enterprise depends, are clearly unsustainable.

It is therefore impossible that industrialized nations such as America will perpetuate our existing way of life going forward, as it is impossible that developing nations currently seeking industrialized status will achieve it.

Source: Everything written in this Exhibit 6 is a quote from the brilliant/genius writings of Chris Clugston and is used with his permission. I urge every reader to go to www.wakeupamerika.com (it is spelled with a "k" and not a "c") and read the works of Chris, including his book "Scarcity". It is a must read for anyone who is concerned about the future of humanity.

**NO MAJOR PUBLISHING COMPANY WOULD PUBLISH THIS BOOK.
NO MAJOR BOOKSTORE CHAIN WOULD CONSIDER SELLING IT.**

This book attacks the vested interests of a large portion of the leaders of the world. It tells the truth about the future of humanity.

Our exploding population is using the earth's resources at an unsustainable rate. That fact *must* cause the utter and complete destruction of human civilization in the very near future, with the horrible deaths of billions. Only one course of action will reduce the death and destruction, and permit the human species to survive on this planet.

AN HUMANS: ENDANGERED SPECIES

Read the irrefutable evidence.

- Can the facts, math, and logic set forth in this book be shown to be wrong?
- If the facts, math, and logic cannot shown to be wrong, will all of humanity follow the plan set forth to save our civilization, and prevent the horrific deaths of billions of human beings?

Every aspect of human society must change if our species is to survive on this planet for even a short period of time.

YOU MUST TAKE ACTION. THERE IS NO OTHER CHOICE.

ABOUT THE AUTHOR At the age of 20, Jason G. Brent received a Bachelors in Engineering, with honors, from Lehigh University. At 21, he received a Masters in Business from the Columbia Graduate School of Business. He obtained a Law Degree (JD) from the Columbia Law School, where he was designated a Columbia Harlan Fiske Stone Scholar, at the age of 24.

Mr. Brent's work experience includes designing guided missiles; management consulting for one of the big four accounting firms; accounting, budgeting, and costing for one of the major motion picture studios; representing major motion picture stars as both an Attorney and CPA; becoming a Partner in one of the largest law firms in the country; and serving as a Municipal Court Judge in California. He also found time to act as a motion picture and television producer.

Jason Brent has studied the relationship between the ever-growing human population and the Earth's finite resources for over 50 years. He is one of the most knowledgeable people on the planet about the future of humanity and what can be done to save it. He was forced to resign from the American Mensa Society, the genius society, because he told the truth about the coming destruction of humanity. His writings have so irritated the Catholic Church that a Cardinal devoted an entire homily given at St. Patrick's Cathedral in New York to attacking him and his ideas. A fact of which he is duly proud.

