



CHAPTER 4

TOO CLOSE FOR COMFORT: OVERPOPULATION.

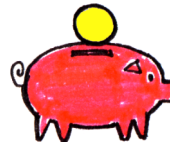
In the last 200 years the population of our planet has grown exponentially, at a rate of 1.9% per year. If continued at this rate, with the population doubling every 40 years, by 2600 we would all be standing literally shoulder to shoulder.

-- Professor Stephen Hawking

Global warming is a by product of a bigger, more serious issue: overpopulation. One doesn't need statistical proof to see that the world is getting crowded. We can see it clearly in our day to day lives as we struggle to find a parking spot at the shopping centre, wait months for a doctors appointment and

see oceans of new, compact suburbs springing up all around us.

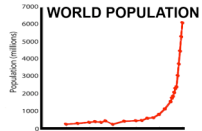
Let's take a look at the facts. For the majority of the two million years of human history, the population was less than a quarter of a million. It took thousands of years (until 1800) for the population to reach the first billion. In 1930 the population reached 2 billion, 3 billion in 1960, 4 billion in 1974, 5 billion in 1987 and 6 billion in 1999. According to the United Nations projections, the population is predicted to reach an astronomical 9.1 billion by 2050. What's going on? Why is our population growing so out of control? The simple answer is exponential growth. Sounds complex? Well, it isn't.



In a nutshell, exponential growth is based on the idea that the larger a number gets, the faster it grows. This principle can be explained by looking at a child receiving his or her

pocket money. The child is given two choices for increasing their weekly pocket money. The first choice is to start with \$1 worth of pocket money and have this doubled every week. The second option is to start on \$5 and have this increase by \$1 every week.

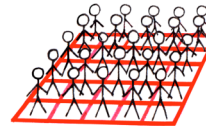
Week	0	1	2	3	4	5	6	7	8
Option 1	\$1	\$2	\$4	\$8	\$16	\$32	\$64	\$128	\$256
Option 2	\$5	\$6	\$7	\$8	\$9	\$10	\$11	\$12	\$13



Option 2 may give you more in the short term, however as you can see in the table above Option 1 eventually will grow

much larger. We may not realise it but what is happening with the simple example of the child's pocket money in Option 1 is what is happening with the Earth's human population (but on a much larger scale).

Imagine that you are reading the paper and the front page states 'Population increases by 1.8% every year'. Would you be alarmed? Probably not. Many of us would think '1.8%? That's nothing!' and we would flip straight through to the sports or comic section. Don't be fooled though. According to Dr Albert A. Bartlett (Professor of Physics at the University of Colorado) this is an alarming figure. If the population was to continue increasing by this amount ever year then it would only take 780 years for the world population to grow to a density where there would be one person per square metre on the dry lands surface.



Stop for a moment. Put this book down and try to picture living in a world like that. Quite uncomfortable? Distressing? It

would be like living in a crowded lift that you cannot escape from. How do people react when they are in confined spaces? Some people remain calm and

cool headed, whilst others freak out and reason and common sense go out the door. They do irrational things that not only harm themselves but the people around them. With a population growing exponentially this is what is likely to happen to our planet.



Professor Bartlett also states it would only take 2,400 years for the mass of the people to equal the mass of

the earth (with a 1.8% growth rate in population)! Eventually we would reach a point where people could not go on living with such limited space. Something needs to change and if we don't try to change, mother earth will do it for us.

Hurting the world



Having more people results in a *tragedy of the commons* situation. To explain this concept, let's take a quick look at the overfishing of the fishery.

A fisherman thinks 'If I don't take these fish then someone else will, so I better take as much as I can!', but what then happens is that everyone has this mentality and starts taking as much fish as they possibly can! You end up with a dead, empty ocean with no fish at all. Perhaps Professor Elinor Ostrom's quote below from *Governing the Commons* says it best:

Wealth that is free for all is valued by no one because he who is foolhardy enough to wait for its proper time of use will only find that it has been taken by another...the fish in the sea are valueless to the fisherman, because there is no assurance that they

will be there for him tomorrow if they are left behind today.

The tragedy of the commons situation that is occurring in the fishery is taking place all over the world with other natural resources (i.e. water, forests, exotic species and oil).



Global warming, deforestation, pollution of air, soil and water are the result of overexploiting the Earth's resources to meet the demands of a growing population. More people on the planet means there is less water, food, energy and space to go around. There will be even less finite natural resources to go around in the western world now that developing countries like China are following in our larger carbon and ecological footprints (China recently overtook the U.S. as the world's biggest CO₂ emitter).

Ways to Increase the Population











Why did the population grow so quickly? Improvements in medicine, sanitation and agriculture technology have decreased diseases, produced more food and allowed many people to live for longer

periods of time. For example, the U.S life expectancy in 1900 was 47 years and by the end of the century it was 77 years. Similarly, the average life expectancy in China was 35 years in 1950 and by the year 2000 it had risen to approximately 71 years.

Ways to Decrease the Population

The table below shows some of the bad and good ways to reduce population.

Bad ways	Good ways
 War	 Contraception
 Disease	 Small Families
 Famine	 Abstention
 Accidents	
 Murder	
Abortion	
Genocide	

Each of us has a choice. Some choices have less painful consequences than others. If we don't choose to do something about controlling the exponential growth of the population, nature will make the choice for us and we can expect to experience more suffering (as shown in the left hand column of the table above).