

## **The Story of Civilization: A Child's Primer of Economics**

by

Joseph George Caldwell

29 May 2004 (updated 2 August 2004)

© 2004 Joseph George Caldwell. All rights reserved. Posted at Internet web sites <http://www.foundation.bw> and <http://www.foundationwebsite.org> . May be copied or reposted for non-commercial use, with attribution.

## Table of Contents

Prologue.....	1
Prehistory .....	1
Hunter-Gatherer Society.....	2
Agriculture and the Rise of Civilization .....	2
Our Story Begins .....	4
The Story.....	5
Four Brothers Set Out to Seek Their Fortunes.....	5
The Village Chief.....	6
A King without a Kingdom .....	6
The Chief Economist.....	6
Property Ownership Changes Things.....	9
Domestication of Plants and Animals; Agriculture.....	11
Growing Populations .....	13
War .....	15
Peace .....	15
Epilogue .....	16
Years 1,000 – 6,000 (10,000 BC – 5,000 BC): War and Peace .....	16
Years 6,000 – 9,000 (5,000 BC – 2,000 BC): Early Civilizations.....	17
Years 9,000 – 12,500 (2,000 BC – 1,500 AD): Later Civilizations.....	17
Years 12,500 – 12,800 (1500 AD – 1800 AD): The Coal Age and the Birth of Modern Technology and Modern Civilization.....	18
Years 12,800 – 12,900 (1800AD –1900 AD): Industrialization.....	18
Year 12,900 (1900 AD): The Oil Age.....	18
Year 13,000: Globalization: Gaia Gets Sick .....	19
Year 13,000+: Synarchic Planetary Management, and a Return to Hunter-Gatherer Society.....	19
References:.....	21

# Prologue

## *Prehistory*

Our world, the planet called Earth, has existed for a very long time – for billions of years. At first, it was a fiery ball of molten rock, or lava. Gradually it cooled, became solid, and was covered with an ocean of water and an atmosphere of air. At some point, the Earth changed its shape a little, and a large area of land rose out of the water. There are two main theories about what happened next. One theory was proposed quite recently (in the early twentieth century, less than 100 years ago) by the German geologist and meteorologist, Alfred Wegener, and the Austrian geologist, Eduard Suess. Wegener called the first large continent Pangaea, which means “All Earth, or All the Land,” in Greek. He believed that Pangaea eventually broke into two large parts, or “supercontinents,” the northern one called Laurasia and the southern one called Gondwana (or Gondwanaland). This breakup of Pangaea happened in the Jurassic Age, when dinosaurs roamed Earth. Laurasia and Gondwana were separated by the Tethys Sea. Gondwana later split into the continents that we know today as South America, Africa, India, Australia and Antarctica. Laurasia split into the continents of North America and Europe, Asia, and the islands of Greenland and Iceland.

The other theory of prehistory is a legendary one. This theory has been around for a very long time – many thousands of years. In it, the first continent was Hyperborea. Two later continents were Lemuria (or Mu) and Atlantis. Lemuria is said to have existed a very long time ago in the Indian Ocean, south of what is now Asia. Eventually, most of it sank into the ocean. All that remains is the Island of Madagascar, and India. The large-eyed primates on Madagascar are called lemurs, after the name Lemuria.

The other “lost” continent of legend is Atlantis. The first recorded history of Atlantis is in the Greek philosopher Plato’s two dialogues, *Timaeus* and *Criteas*, which were written 2,500 years ago. Atlantis was located in what is now called the Atlantic Ocean. According to legend, many people lived on Atlantis. When it sank, only a few of the people, the Atlanteans, escaped to other lands, such as North and South America and Egypt. The Atlanteans were believed to be red-skinned, and that is why the Native Americans and the early Egyptians were red-skinned.

Over long periods of time, life evolved on Earth. How life evolved is a very interesting story, called the Story of Creation. Initially, there were no people – just plants and animals. For a long period of time, the climate was very tropical. The trees were like palm trees, and there were large dinosaurs. The different continents had different kinds of plants and animals. Several times, major catastrophes occurred, and many of the plants and animals were destroyed. For example, one time a large asteroid crashed into the Earth, and filled the atmosphere with dust. The dust blocked off much of the sunlight for a while, so that it got very cold and many animals perished.

The climate changed from time to time, and new kinds of plants and animals evolved (were created). Eventually, there were human beings, or people, on the Earth. For a long time – millions of years – people lived in harmony with nature. They lived off the land, with the other animals. At first, they ate plants, such as fruits, berries and nuts. Then, they learned how to fish and hunt, and they ate animals also. These early people were called “hunter-gatherers.”

All of what I have described so far happened more than 13,000 years ago. The word “history” refers to a written record of the past, such as a scroll or a book. Since no written records exist from the time prior to 13,000 years ago, that period is called “prehistory,” or “prehistoric times.”

## ***Hunter-Gatherer Society***

Hunter-gatherer society was very simple. At first, people lived in the forest or in caves. Most people lived in the same place all of their lives. They lived in small family groups.

Over the years, human beings became more intelligent and knowledgeable, and they learned how to do more complicated things. They learned how to make tools, such as needles, scrapers and knives, and how to use them to make clothes, tents, and shelters out of animal skins, wood and plant fibers. They learned how to make boats to sail on the lakes, rivers, and seas. They learned how to make and use weapons, such as spears, axes and shields. They learned how to make more complicated weapons, such as slings, bolas, bows and arrows. They used these to attack and defend against animals, and to resolve conflicts among themselves.

## ***Agriculture and the Rise of Civilization***

About 13,000 years ago, things began to change. Mankind learned how to control plants and animals. This process was called domestication, or agriculture, or husbandry. The wild plants usually produced small fruit in random places. People learned how to breed the wild plants to develop new varieties that produced much more food. Examples of these new varieties are the cereal grains that we know today, such as corn (maize), wheat, and rice.

Mankind also learned how to domesticate animals. They learned how to breed wild animals to develop new varieties that were much easier to control, and produced more milk. The major species of domesticated animals were cows, pigs, goats, sheep, and chickens. They domesticated some animals for companionship and help, such as cats, dogs, and, much later, horses.

The big advantage of using domesticated varieties of plants is that, in some places, human beings could now produce much larger quantities of food than was available from nature. This was possible in places that had very good soil and good weather (the right amount of sun and rain). Before, human beings were totally dependent on nature for their next meal. Now, they could produce large amounts of food on a regular basis.

The big advantage of using domesticated animals was similar. With large herds of sheep, goats, pigs, and cattle, and flocks of chickens, mankind had available large and dependable quantities of meat and leather. Also, cattle, dogs, donkeys and horses could be used to help with the work. Dogs could help herd sheep and help guard and protect people. Cats could kill rats and mice. Cattle and donkeys could help carry things, and pull plows to till the ground.

The big difference between agriculture and the hunter-gatherer lifestyle was that agriculture required much more planning, organization and discipline than hunting and gathering. In the hunter-gatherer lifestyle, people would simply look and see each day where to get food. Everyone had to work about the same amount, or he would starve to death. The work was

interesting and challenging, however, and life was pleasant. Each person had access to food in the local area, simply by figuring out where it was and how to pick it or kill it. If food became scarce in an area, a family or tribe could move on to another area, or fight with another tribe for their territory. Poverty as we know it was unknown – all people had the same opportunity to improve their lives and have sufficient food and shelter. In hunter-gatherer society, social organization was simple. In the agricultural lifestyle, crops had to be planted and tended, seed had to be stored, flocks and herds had to be tended (fed and protected). This kind of society required much more organization, specialization and control than the hunter-gatherer society.

Mankind has always been taken with pretty stones. There were lots of natural gemstones, such as obsidian, quartz, citrine, amethyst, tourmaline, beryl, aquamarine, emeralds, rubies and sapphires. The only metal that occurred in substantial amounts in nature was gold. Mankind was interested in gold because it was rare, pretty, durable and could be pounded into different shapes. Gold was useful for making jewelry, but it was too soft, however, to be used as a tool. After a while, mankind learned how to extract other metals from the earth. That process is called metallurgy.

Metallurgy involves the use of fire. Mankind had always been fascinated with fire. At first, all he used it for was to cook food, to make it tastier and easier to eat. He also used fire at night, for warmth and protection against wild animals. He learned that if sand was melted near a hot fire, it turned into glass. He observed that if animal grease and ash were combined, they turned into soap. He noticed that if clay was fired, it turned into very hard brick or ceramics, which did not dissolve in water. The key point was that fire could be used to change things. Mankind learned that if certain types of earth or rocks were cooked together, or partially burned with charcoal, they would turn into other metals, such as copper, silver, tin, lead, zinc and iron. Some of these metals, such as copper and silver, were very pretty, but, as gold, they were not very strong. Mankind discovered that by combining them, he could obtain new metals, called alloys, that were very strong and could be sharpened to cut things, prior to the development of iron. The most important of these were bronze, which is a combination of copper and tin, and brass, which is a combination of copper and zinc. Bronze was used to make strong swords, and brass was used to make many tools and appliances.

With agriculture, mankind was able to produce much food. In some places, where the soil was fertile and the weather good, a single man could consistently produce sufficient food for ten people. With the planning and organization that agriculture required and nurtured, and with the extra time and energy that agriculture enabled, mankind had the time and energy and organizational skills to be able to do many other things. First, he was able to build much larger communities than before. He was able to build large towns and cities.

As human society became more complex, human activity became more and more specialized. In hunter-gatherer societies, everyone possessed about the same skills, and did about the same jobs (namely, hunting and gathering). As civilization developed, however, many different kinds of jobs were required. These jobs required a lot of training, and had to be done in particular ways in particular places at particular times. People became very specialized in what they did. Some people became full-time farmers, and others became full-time metalworkers, and others became full-time merchants, artisans, weavers, tailors, millers, carpenters, poets, musicians, maids, soldiers and seamen. It was no longer the case that each person or family obtained his daily food from nature, in the area where he lived. Instead, each person worked at a particular, specialized job, and received food in exchange for the product of his work, which might not involve food at all.

In order to run a large society, it is necessary to communicate over distances, and to keep records of what is going on. In order to do this, it is necessary to have a written language. Eventually, written languages were developed. With this advance, it was possible to build and operate large civilizations. Some people worked as scribes and accountants.

In summary, because some of the people – the farmers – could produce sufficient food for everyone, other people could engage in other activities, such as building cities and making lots of things of interest, such as clothing, jewelry, furniture, weapons, and tools. Human society became much more complex. Compared to the hunter-gatherer existence, the lives of most people became very controlled, monotonous, and impoverished. They were no longer free to come and go as they pleased, and do as they chose. They had to work the fields and tend the herds, with little opportunity for variety, freedom, or challenge. The lives of the rulers, however, were very luxurious, varied and challenging. Society was comprised basically of two classes of people: a few very rich, including the rulers, large property managers and merchants; and the many very poor farmers. There were a few people in the middle, including skilled craftsmen, tradesmen, and artisans (such as metalworkers, jewelers, armorers, stonemasons, sculptors, carpenters, weavers, tailors, millers and leatherworkers); small merchants and caravan operators; inn or caravansary owners; seamen; scribes and accountants; middle-level government workers and military officers; poets and musicians; and priests.

The ability to generate a food surplus radically changed the nature of human society. It was now possible to engage in much more complex activities, and do things on a grand scale. It was now possible to build and operate large empires. With agriculture, mankind was able to do everything on a grand scale. And this included fighting. The development of large-scale empires led to large-scale war.

In the hunter-gatherer era, there was some fighting among people, such as within or between nearby families, but it was on a small scale. There was never much need for fighting. Except for land, there was little to fight over. People did not have much in the way of material possessions. Everyone had access to nature's bounty, just for the taking. The main challenge faced by mankind was the struggle for survival against nature, not against other communities. Mankind did not have the organizational skills to build or operate armies. The human population was small, because the food supply was limited.

With the advent of agriculture, however, mankind had the ability to organize, equip and maintain large armies. Because of metallurgy, mankind now had strong weapons, such as swords, spears, and shields. After a long time, horses were domesticated to draw chariots. And after a very long time, horses were bred to a size where they could carry a man. These advances – all of which were enabled by the energy and organizational skills associated with agriculture – enabled mankind to wage war on a grand scale. Large civilizations arose, and invariably fought each other. Sometimes, whole civilizations were destroyed in this process.

## ***Our Story Begins***

The main difference between the hunter-gatherer society and agricultural society is the way that goods are produced and distributed. In hunter-gatherer society, nature produces the goods (plants and animals for consumption) wherever they thrive, and there is little to distribute within the family or tribe. The “balance of nature” determines the relative numbers of each different species. In agricultural society, the government decides what is produced and how it is

distributed. Agriculture enables the production and accumulation of vast material wealth, and the rulers decide how it is distributed.

The field of study of the production, distribution and consumption of goods and services is referred to as “economics.” Prior to the development of agriculture, economics was of trivial interest – the production of goods – food and other plant and animal products – was done by nature, and the distribution of the food or other natural products was done within the family. Economics becomes of interest with the development of agriculture and the rise of civilization.

This book is the story of civilization from the point of view of economics. It is a very simplified version of the story – a fable – intended to emphasize the main points of the story.

## **The Story**

### ***Four Brothers Set Out to Seek Their Fortunes***

Once upon a time there were four brothers. These brothers were part of a small band of hunter-gatherers. The brothers were strong and healthy, and they led happy, exciting lives hunting and fishing, and participating in social activities. Their wives gathered food, made clothing, cared for the children and prepared meals. They had everything that anyone needed to be happy – food; shelter; families; challenging, interesting work; freedom to explore and seek new adventures; and social activities. They enjoyed their life in the band.

But the brothers were not truly satisfied. They sensed that there could be more to life. They wanted more than just the daily activities of hunting, fishing, and social activities. All of their needs were provided by nature, but they yearned for more. They wanted to do more than participate in interesting, challenging activities. They wanted to do more than simply pick berries and fruit, and hunt wild animals. They wanted to create. They wanted to build things. And they wanted control. They wanted to make their own way in life, to control their lives and destinies. They were tired of being threatened by wild animals and being at the mercy of bad weather. They were tired of being simply “children of nature,” and they wanted to move on.

The four brothers talked among themselves for a long time, trying to decide what to do. They agreed on some points, but disagreed on others. Each of them had his own ideas about what to do, and wanted to be the leader. After some time, they decided that it would be best if each of them set off separately, to seek his own fortune. They each gathered together their wives and children, and other members of their band, and set off in different directions.

The four brothers each traveled for many weeks, until each of them reached new lands that suited them. They had discussed what to do next. No longer would they simply fish and hunt and gather food from nature’s bounty. Instead, they would remain in one place, and build a village.

At this point, the activities of each of the brothers were similar, and I will not describe what each of them accomplished. Instead, I will tell the story of one of them, and return to the others later.

## ***The Village Chief***

The first brother settled in a large valley, which was rich in wild plants and animals. A large river flowed through the valley. The weather was very good. There was lots of sun and rain. The brother selected a good place for the village. Everyone was excited about the new undertaking, and worked hard to build the village. They used wood from the forest for the walls of the houses, and thatch from trees and reeds for the roofs. They built a strong barrier around the village, to keep out the wild animals. After a short time, the village was completed.

Before building a village, the band had lived as nomadic hunter-gatherers. They had simply moved around, living in caves or on the ground in tents or crude shelters. As hunter-gatherers living off nature, everyone had about the same status. If people did not like the leader of the band, they would agree on another leader, or simply leave the band.

In the village, however, life was a little different. People had invested a lot of effort in making nice houses and furnishings, and life was safer and more comfortable. But the houses and the protective barrier were large, and could not be easily moved. It was not practical to simply move away, without leaving everything behind. Because the village was the idea of the brother, and because he had organized and led all of the work to build it, everyone agreed that he should be the leader, or chief, of the village. Since the village was small and everyone had participated in building it, everyone had a voice in running it. Because the chief had good ideas, good judgment, lots of energy, ambition and determination, the people of the village listened to him. Because he had good judgment and treated everyone fairly, they looked to him to resolve conflicts that arose.

## ***A King without a Kingdom***

Although life was good in the village, the chief was still not satisfied. He had enjoyed the adventure of moving to the new land, and the undertaking of building the village. He enjoyed leading the people in his band, and helping them to run the village in an orderly manner. But village life was really very little different from nomadic hunter-gather life. The villagers were still hunters and gatherers. The only thing that had changed was that they remained in one place – the village.

The situation was not at all what the chief and his brothers had imagined, when they had discussed taking control of their destinies. As the weeks passed, the chief became more and more restless. He knew that there had to be much more to his life than simply directing a band of hunter-gatherers who had settled in a village.

Then, one day, something happened that changed things very much. A visitor arrived at the village. He was alone. He was attired very well, and he spoke very well, and he had some very interesting ideas.

## ***The Chief Economist***

The visitor called himself the Chief Economist. He spoke with the village chief, and was very interested to hear about the founding of the village and its operation. The chief told him about



his three brothers and their plans to take control of their destinies and create something much greater than their previous hunter-gatherer lifestyle. He told the Chief Economist about his frustration in not having achieved his goal.

The Chief Economist listened intently to the chief's story. When the chief was finished, the Chief Economist told him that he had a solution to the chief's problem. The chief was very interested to hear this, and asked him what it was.

The Chief Economist explained to the chief that the problem was that nothing had changed. All of the people in the village were still hunter-gatherers. They still got all of their food and other materials, such as wood and leather, from nature, free. The Chief Economist explained that as long as this system continued, things would continue pretty much as in the past, and that the chief would never realize his goal of creating something significant.

The chief was puzzled. How could things be changed? In order to survive, people had to gather food and hunt animals in nature. If they did not, they would starve.

The Chief Economist agreed that people still needed food and materials. He explained to the chief, however, that as long as these things were provided free from nature, no significant change would ever occur. As long as people could simply pick berries and fruit from bushes and trees, and hunt and fish, they would never accomplish anything of any significance. In order to build something significant, it was necessary for people to work on it, but as long as everything that they needed was free, they had no reason to do so. The key, the Chief Economist explained, was to change things so that people had to work for their food. And what they would work on were the significant things that the chief wanted to accomplish.

The chief pointed out that the members of his band had in fact constructed the village, even though all of their food was free from nature. The Chief Economist agreed, but pointed out that each member of the band had simply built his own house and part of the protective barrier that provided security from wild animals. Each person was working on his own house, and was therefore happy to do so. The Chief Economist emphasized that this was very different from working on a project that did not benefit them directly. What was needed was for the people to work on the chief's project, not on their own projects.

The chief explained that he understood what the Chief Economist was saying, but he did not see how to bring it about. Nature's bounty was free for everyone. It was not possible for him to stop everyone from taking it, and force everyone to work for him on his own project.

The Chief Economist agreed that the chief was not physically able, by himself, to deny free access to nature's bounty to the village members. But he said that there was an easy way to accomplish this goal, with very little effort.

The chief was very eager to hear the Chief Economist's suggestion. At this point, the Chief Economist said that he would be very pleased to tell the chief his suggestion, but only if the chief would pay him a large fee. The chief agreed.

The Chief Economist explained to the chief that as long as people could obtain all of the food and other items free from nature, they would never put much effort into building anything of significance, either for themselves or for anyone else. Life was too easy. It was absolutely necessary, he explained, that the chief control all of the food and other items that people were now getting free from nature, and exchange them for their services to do the things that he

wanted. In fact, people would be doing more work – the work to get their food, and extra work – for the chief – to be allowed to keep it and eat it.

The chief agreed that this would certainly work, but that it seemed to him that it was impossible for him to control all of nature's bounty. If he tried to do so, some of the more capable members of the band would simply gang up on him, and he would no longer be the chief. The Chief Economist agreed that he could not do it simply by himself. To build something of significance, it was necessary for him to obtain the cooperation of the other more capable members of society. What he had to do was persuade these other key people to participate in this venture with him. The chief would share some of his power and benefits with these people. The remaining people in the village would not be able to protest this arrangement, since they would have no good leaders. The chief and his key leaders would be called the elite, and everyone else would be called the commoners, or peasants.

The path to success was to arrange things so that the people's free time was spent working almost solely on the chief's projects, and not on their own. The key was to include all of the most intelligent and ambitious people in the elite group. In this way, the commoners would have no one else to turn to. Since there were relatively few of these exceptional people, the elite would always be a small group, and the commoners, who would do all of the work, would be very large by comparison. The Chief Economist pointed out that it didn't really matter how the elite were selected – by appointment, or merit, or democratic election. All that really mattered was that the size of the elite was small relative to the rest of the population, and that all exceptionally intelligent or ambitious people had some way of joining it.

The chief saw the wisdom in this proposal, but he was still a little skeptical. He told the Chief Economist that there were many more commoners than elite, and that they could simply overpower the elite. The Chief Economist agreed that this was possible, and that it would require some intelligence, cunning, and skill to implement the system. He could not mistreat the people in an extreme fashion. He could not become a tyrant. But he pointed out that between the chief and the other elite, there was little leadership ability left in the village, and it would not be a difficult job to do.

The main thing was to convince the people that it would be in their best interest to agree to this arrangement. Convince them that under the new arrangement the village would be much safer. With the better organization, it would be able to grow larger and stronger. Point out that you would not live forever, and if they set up a strong organization, their future security and the survival of their children would be assured. Explain to the people that the new structured organization was called a hierarchical organization, and that it would be much stronger and more effective than the informal matrix organization of the past. Tell them that the village would have several strong leaders, not just one, and so it would be less likely for the chief to become a cruel tyrant. Tell them that if they did not agree, then he would consider starting a new band somewhere else, without them. The Chief Economist pointed out, finally, that if the chief could not convince the people to adopt the new organization, he did not deserve to have it, and he would be unable to make it work anyway.

The Chief Economist said that if this plan succeeded, then the village would grow to a very large size. At that point, it would be called a kingdom, and the chief would be called a king.

The chief was convinced of the merit of the Chief Economist's proposal, and he asked for more details. He asked how many landowners there should be, and how he should divide the land among them. The Chief Economist told the chief that what he needed to do was to split the land

into at least four large parts for now, and into more parts as the village grew into a kingdom. Three of the parts he would give to the three ablest men in the village, and the fourth he would keep for himself. He would tell the three men that they had complete control of their parts of the land – a franchise. They had full control of all of the plants and animals and water on their land. If someone else from the village wanted something, he would have to trade for it.

The chief listened to the Chief Economist's proposal. He was surprised. "Is that all there is?" he asked. The Chief Economist answered that that was almost all there was to it. The three people to whom he would offer control, or ownership, of the land would surely agree, since they would be very happy to be in such powerful positions. Each of them would readily agree to defend each other's right to control his awarded land, in exchange for similar support. But there was one additional thing. In exchange for the right to control the land, each of the three landowners had to pay the chief a yearly tribute, and every time someone traded anything, the chief was to be paid a small amount. The yearly tribute was called a property tax or a franchise tax or a use tax. The small amount paid for each trade was called a sales tax or transaction tax or transfer tax. The Chief Economist summarized by saying that with private ownership of the land and taxation of all ownership and transactions, the chief would then have all of the resources that he needed to accomplish his goal of building something significant.

The chief pondered what the Chief Economist had told him. He was surprised that it was so simple. He could not see any reason why this scheme would not work. He decided to implement the Chief Economist's suggestion.

He called together the other three ablest men of the village, and explained his plan to them. As the Chief Economist had predicted, they were very excited at the prospect of being in charge of large tracts of land, in exchange for the taxes. They realized that they would be able to control their pieces of land, as long as they all stood together. They asked the chief what he would do with the taxes. The chief replied that he planned to build a large house, and he pointed out that they would be able to do so, too.

The final step in implementing the plan was to get the other villagers to agree. If they did not, and they all left, then the plan would not work. He called all of the villagers together, and told them about the plan. He explained that the village was growing, and that he was not able to manage it all by himself. He explained that it would be better to have four people in charge, instead of a single person, who might become a tyrant, or might die, leaving them leaderless. He explained that under this new arrangement, it would be possible to construct a bigger, stronger village, and that this would afford them greater protection from wild animals and other tribes. He explained that the people could still hunt and gather on each of the three pieces of land (but not on his), but that goods could not be traded without paying a tax. Also, the villagers would have to contribute to each landowner's tax. The people discussed this new plan, and considered the alternative of leaving. The main advantage of the new arrangement was increased security, in exchange for a little loss in freedom, and some loss of time to assemble the tax contribution. They all agreed to stay, and participate in the new arrangement.

## ***Property Ownership Changes Things***

The valley in which the village was located included a large forest, a large plain, and a large lake. The Chief Economist explained to the chief that it was important to divide the valley into parts that were quite dissimilar. If all three parts were similar, the inhabitants of each would be

able to find all that they needed in their own part, and no trade would occur. Taking this into account, the chief divided the valley into a forest part, a plains part, and a lake part. In addition, there was his own part, which was located in the hills overlooking the valley.

After the new ownership arrangement was agreed upon, things did not change right away. There were still plenty of game and plant foods available in each of the three sections of land, and people hunted and gathered pretty much as before. But before long, each of the three landowners had to pay their franchise tax. Since all that was available in the valley were wild plants and animals, the tax was paid in these items. In order for the landowner to pay the tax, the villagers had to contribute. To do so, they had to spend some additional time collecting more food, and hunting more animals – enough for themselves and for the tax.

Initially, the landowners allowed the people to obtain much food and other materials from nature for free. All they required was that the people contribute the amount necessary to pay the franchise tax. This did not work at all for the chief. He received the franchise tax, as planned, but since everyone was still able to live off the land, no one was interested in doing any work for the king or the landowners, to build their large houses. The chief remembered what the Chief Economist had said, and he passed a law that everyone had to turn over all products from the land to the landowners. At first, people objected to this very much, since they still regarded nature's bounty as belonging to everyone. But the chief was very forceful, and emphasized the necessity for doing this. He reminded the people once again of the tremendous advantages of the new system. The people agreed to do what he requested.

Initially, things seemed to work pretty well. The landowners collected all of nature's bounty from the people, and distributed it to them as they saw best. This was done fairly, and so no one objected. But soon, a problem arose. Because the people on one section of land were no longer free to roam to another section, they did not have the variety of food and materials that they had before. The lake people had plenty of fish, but no game or fruits, or wood to make things and cook with. The plains people had plenty of game and fruit, but no fish, and little usable wood. The forest people had some game, but no fish and little fruit. To obtain all that they needed and wanted, it was necessary to trade with people in the other sections. Every time they traded, it was necessary to pay a portion of the trade to the chief.

The chief was amazed! This is exactly what the Chief Economist had predicted.

Having to trade for things and to contribute to the landowner's tax was a hassle, but the people agreed to continue with the arrangement. Life was not as pleasant as before, but everyone agreed that the village was more secure than before. Because the people were hunting and gathering more food than before, to pay the taxes, the chief and the three landowners were collecting much food and materials.

At first, the chief and the landowners were very pleased. The system seemed to be working. But after a while, the chief and the landowners realized that there was a problem. The chief did not want more food and materials than he could eat and use. He wanted a bigger house. The landowners felt the same. Nothing had really changed at all. Everyone was working harder, but nothing was really changing. The chief called for the Chief Economist.

Once again, the Chief Economist was quick to point out the problem. He said that all the people knew how to do was gather food and fish and hunt. But to build a large village and then a kingdom, they would have to do many other things, such as build large buildings. They would need training in this. The Chief Economist pointed out that this could not be done overnight,

and would take some time. The Chief Economist described all of the different kinds of skills that would be required to run a kingdom. These included not just building larger houses, but making roads and bridges. Also, some of the people would have to work as soldiers. For the kingdom to work well and grow and prosper, people would have to work in many different specialized occupations. It would no longer be practical for each person to be a generalist, able to make clothes, and do carpenter work, and grow food. In the future, each person would do just one type of work. There would be farmers and merchants and carpenters and metalworkers and soldiers and jewelers and musicians and priests. The kingdom would be so large that there would be many of each of these different kinds of workers. This system would be referred to as specialization. Each person would be a specialist, and have a single occupation.

## ***Domestication of Plants and Animals; Agriculture***

Under the new arrangement, things began to happen. The landowners wanted the people living on their land to build larger homes for the landowner. With control of the entire product from their land, this was an easy thing to accomplish. But in order to build much larger homes, much wood was needed from the forest. And so the people in the forest had much more work to do, felling trees. Soon, many people were doing things other than hunting and gathering. And the people doing the hunting and gathering were doing it all of the time, instead of just a couple of days a week. Soon, the game began to disappear. And the fruit and berries and nuts were not sufficient. And the fish in the lake became scarce. Things were not going well at all. The village population could not grow, since there was not enough food for more people. In fact, by staying in one place – the village – there was actually *less* food than before, and it was harder to obtain. If nothing was done, the village population would actually start to shrink! Before, the people would move around from place to place. When they had eaten the fruit and berries in one place, they would move on to another place that was untouched. In the village, the nearby fruit and berries were soon gone, and the animals stayed far from the village. The amount of work involved in finding food was much more than before. While there had never been a lot of spare time to devote to the chief's projects, now there was even less. The chief called once again for the Chief Economist.

The Chief Economist saw right away what the problem was. He explained that it was not possible to obtain sufficient food from nature, with just a few of the people doing the hunting and gathering for everyone else. Nature did not produce food in sufficient quantity to support a large, permanent village. As long as its people remained hunters and gatherers, there would never be much surplus time and energy left over for the chief's projects. The Chief Economist explained that it was necessary for the people to use different means of producing food – ways that were much more efficient and more productive. In order to produce sufficient food that a large number of people could become engaged in other activities, such as building things for the landowners and the chief, it was necessary to plant crops and develop large herds of livestock.

The Chief Economist explained that it would be easy to convince the people to plant crops and develop herds of livestock, because much more food could be produced with much less work. And in their increased spare time, the people could work on other, more interesting, projects.

The chief agreed to this. As the years passed, the villagers became more and more productive. They developed varieties of plants that produced much food, and varieties of animals that were easy to control and produced much milk and meat. These new varieties were called *domesticated* plants and animals. The new way of producing food was called *agriculture*.

Using agriculture, people could produce so much food that many people were free to work on the projects of the chief and the landowners. People began to specialize in different types of work, just as the Chief Economist had described. Most remained as farmers, but many entered other occupations, such as carpenters, stonemasons, and metalworkers. Some became traders. Some became artisans, who produced beautiful jewelry and other works of art. Some became musicians, and others became priests. Some became scribes and accountants, to keep track of everything.

After a while, the chief and the landowners had large homes and much property. But most of the villagers were very poor. The landowners gave them only enough food and shelter to stay alive. The Chief Economist had been right that fewer people could produce more food than before, but they did not get to enjoy their increased spare time, after producing the food. Instead, the “interesting” projects that they worked on were the king’s and the landowners’ projects! Their work as farmers and laborers was much harder and much less interesting than their previous lives as hunters and gatherers. And while they had much free time before, now they had almost none at all.

Under agriculture, a relatively small proportion of the people could produce sufficient food for everyone, and a large proportion of people were available to engage in other activities. Because of the way things were set up, however, they were only allowed to work on the chief’s projects. Because of the large amount of surplus labor, the chief and the other members of the elite had many people available to work on their projects. Finally, things were beginning to change in a big way. But the changes were benefiting only the elite, at the expense of the peasants. The elite now had lots of property and material possessions, and the free time and wherewithal to do as they pleased. The peasants, on the other hand, had no free time at all. They worked all of the time, and lived in poverty. They owned little or nothing, and they had no freedom.

The chief was amazed at how well the Chief Economist’s scheme worked. The only thing that he ever had to do to ensure success was to make sure that the most intelligent and ambitious people were always included among the elite. By doing this, the peasants never had any other leaders, and there was never any chance of a rebellion or uprising. The system was incredibly clever, yet completely natural. Because of human greed, almost everyone wanted to be a member of the elite. But only a small proportion of people possessed a high degree of intelligence and ambition, and once these people were included in the elite, the remainder of the population – the peasants – had no chance of changing the system. The system was foolproof, and, it seemed to the chief, would last forever. And the chief realized that this system was the only way that impressive things could ever be built: the efforts of a large number of people all going to support the ideas and projects of a very few. Without this scheme, nothing of any significance would ever be built. Under it, it would be possible to accomplish great things.

Some of the people saw that their new way of life was far inferior to their old lifestyle as hunter-gatherers. But it was too late to go back. Most of the game was gone, and people had lost their skills as hunter-gatherers. And most of the land far from the village was now occupied by other rich chiefs and landowners, who operated the same kind of system.

The people realized, too late, that they had made a terrible mistake. They had not realized how precious their freedom had been, in their previous lives as hunters and gatherers. They had traded their freedom for safety, security, and survival. But now they were very poor. Before, poverty was unknown. Now, almost everyone, except for the chief, the landowners, and a few wealthy merchants, was very poor. They did not have freedom to roam, and they did not have

an abundance of good food, as before. Their lives were controlled by the landowners. Since they were now specialists, their work was always the same. The farmers worked from dawn to dusk at the same, monotonous task, and received only a small portion of food in exchange for their hard work. The soldiers also worked endlessly at the same task, in exchange for meager rations. Before, people had much free time. Now, they had no free time at all – they had to work almost all the time. Before, they had all the food and materials they needed. Now, they had barely enough to survive on. Their diet was not as varied as before, and their health declined. But there was nothing that could be done. There was no escape. The new system was too strong, and their lives had been changed forever.

The Chief Economist had done his work well – but only for the chief and his friends! Most of the people had to work all of the time in hard, boring, dreary jobs, and had very little free time at all. It was true that, with agriculture, they produced much more food than before as hunter-gatherers, but all of the benefit from this work went to the king and his powerful friends. All that the people had now was grinding poverty; hard, uninteresting work; and almost no free time. They had lost their freedom. They had lost their interesting, healthy, exciting lifestyles. They had traded their freedom for safety, security, and survival. But at what a price! They were now slaves to drudgery and poverty. All of their work was going into making the king and his friends wealthy. The king and his friends had meaningful, interesting lives. They had the freedom to imagine new projects and implement them. The chief and his friends had accomplished his objective of being able to create and build things. They had the time and the wealth to build neat things and play neat games. But the people, who had once been free to lead and enjoy their lives as they saw fit, had paid a terrible price – they had to work all of the time for the king and his friends, and pass their lives in grinding poverty. Before, as hunter-gatherers, they had led happy, exciting lives in a Garden-of-Eden paradise, with all of their needs provided for. Now, under agriculture, they worked from dawn till dusk for someone else, and lived on barely enough to survive.

## ***Growing Populations***

As the years passed, it seemed that all of the problems involved in switching from a hunter-gatherer society to an agricultural society had been solved. Under agriculture, the people were now able to produce much food. The village prospered. Because a small number of people could produce so much food, lots of people were able to work in other occupations. The economy prospered. The king and his landowner friends, and the wealthy merchants, grew wealthier and wealthier. Most of the people were much worse off than before, but there was nothing that they could do about it. The world belonged to the rich and powerful – the interesting lives of the elite were supported by the dull lives of the commoners.

Because there was much more food than before, the village population started to grow. The village could now produce all of its food, and did not need any from wild plants and animals. After a while, the village became so large that it could no longer be called a village – it was called a town. As the population grew, the fields and meadows where the farmers raised crops and livestock spread far from the town. To make it more convenient, the landowners established villages outside of the town. Over time, these also grew in size. As the years passed, the king established more towns. Eventually, the original village grew into a large city. The city did not grow any food at all. It simply imported all of its food from the many towns and villages around the country.

The king was very pleased. His dreams had been realized. He had built a large kingdom. He was now very wealthy. He could do anything he wanted to. He had accomplished his goal. He was satisfied. But not for long.

As I mentioned at the beginning of this story, the king had three other brothers. All four of them had set off in different directions to seek their fortunes. The really interesting thing that happened, however, is that the experience of all of the brothers had been very similar. The Chief Economist had visited all of them, and convinced them all to adopt agriculture and a market economy. And now, all of them, just like the first brother, had large kingdoms.

All of the kingdoms were thriving and growing. It wasn't very long, therefore, before they grew so large that all of the land in the region was occupied. Since there was no longer any free land, it was not possible to grow more food (without destroying the forest, which the king would not allow). But, at least for a while, the population kept on growing. Very soon, there was not enough to eat. This was a very serious problem. Once again, the king called for the Chief Economist.

The Chief Economist understood the problem, and saw right away what the solution was. He explained that the king's neighbors had no right to the land that they occupied, and that he would be completely justified in going to war to take back the land that was rightfully his. At first, the king was rather shocked. He pointed out that he didn't have any more right to the land than the other kings. The king and the Chief Economist argued over this point for some time. After a while, the king decided to call on the High Priest, to resolve the issue.

The High Priest sided with the Chief Economist. He said that the king's people were much more religious than those of the other kingdoms, and, therefore, the gods would favor whatever action he took. He also pointed out that there were some differences in the religious beliefs of this kingdom and the others. He emphasized to the king that their religion was the only correct one, and therefore the gods would surely side with them and help punish the other kingdoms for their erroneous beliefs and ways. The High Priest pointed out that to the king that the populations of the other kingdoms had also grown very much, and that their people were also starving, and that it was just a matter of time until those kings attacked him. If the king did not act, he would surely lose his kingdom – either the starving people would have a revolution and overthrow him, or the other kings would attack and try to take his kingdom away. By attacking them first, he was simply acting in the best interest of his people.

The High Priest pointed out that, in the present circumstance, the king had no choice but to go to war. The gods would favor whom they would favor. He could do nothing, and surely lose his kingdom, or he could go to war and have a chance of keeping it. The High Priest pointed out that the likelihood of winning the war was much greater if the king prepared for war and attacked first, rather than if he waited to be attacked. And he knew that if the king lost the war, then he, the High Priest, would be put to death by the conquering king. The new king would claim that, since the High Priest's kingdom lost the war, his religion was obviously false, and the penalty for spreading false religion was death.

The Chief Economist concurred with the High Priest's reasoning. The king considered their point of view, and saw no flaw in their reasoning. He decided that he had no choice but to go to war. He explained the situation to his people. He explained that if they continued as they had been, everyone would starve. Moreover, since other kingdoms were facing the same problems as they were, some other kingdom would eventually attack them. They had no choice but to go to war. The only choices were whether to attack first on their terms and timing, and likely win, or



be attacked by surprise, and likely lose. The king even went so far as to express his opinion that the other kingdoms were probably already preparing to attack. The people got very excited. They agreed with the High Priest that their cause was good, and that the gods would surely favor their undertaking. They were anxious to go to war, to save their kingdom, and their lives.

## **War**

For the next several months, there was much activity in the kingdom, while everyone prepared for war. There was lots of work, while people built better defenses and manufactured weapons. Everyone was very busy.

Finally, the big day came, and the king's soldiers marched into battle against the neighboring kingdom. But the neighboring kingdom was not unprepared. The king of that kingdom also had a Chief Economist and a High Priest, and the attack was not unexpected. Both kingdoms fought bravely and cleverly. There were many skirmishes and battles, but neither side was able to win a conclusive victory. Things were at a stalemate. After some time, both kings retreated, and sought counsel with their advisors.

The first king called for his Principal Strategist. This was the man who devised war plans. The Principal Strategist explained that the reason why neither king could achieve a clearcut victory was that their kingdoms were very wealthy, and they had lots of soldiers and military equipment. Continuing to fight the other king's soldiers was not working. The soldiers were well fed, and the towns were well fortified. In his opinion, it would be necessary to destroy the enemy's towns and agricultural capacity, before the other king could be defeated. Once the towns were destroyed, and the fields and herds were destroyed, the other kingdom could easily be conquered.

The king agreed that this sounded like a good approach, and so he attacked the other king's fields, herds, and towns. He ravaged them. But, once again, the other king was not sleeping. His Principal Strategist immediately saw what was going on, and realized that it was a good strategy. So the enemy king launched attacks against our king's towns, fields, and herds. This went on for some time. And then, after a while, things began to change.

So many people had been sent into battle and died that there were no longer too many people. And both kings were getting tired of playing a game that they could not win. The surplus population was gone, and the remaining people had lost their lust for war. The two kings agreed to stop fighting each other.

## **Peace**

What happened next, after the war, was really amazing. Since so many people had died in the war, there was once again land for everyone. And since so many towns and villages had been ravaged, there was much work available for rebuilding. The economy boomed. Everyone was doing well.

The king was very surprised at what had happened. He had thought that the massive destruction of villages and towns would have caused severe and long hardship for his people.

But exactly the opposite had happened. He wanted to understand what was going on, and he called for his Chief Economist.

The Chief Economist explained that what had happened was not surprising at all. He acknowledged that the war had caused a lot of damage, but he said that this did not matter. In fact, it was a real benefit. From an economic viewpoint, all that really matters is the amount of economic production that is taking place. From an economic viewpoint, it is five times better to build a house and tear it down and build it again five times, than to simply build it once. The king was amazed at this, but he saw that it made sense. Every time the house got rebuilt, lots of people had jobs and made money selling things – the brick makers, and the bricklayers, the carpenters, the glaziers – everyone. And every time goods were bought and sold, he collected taxes. Everybody was better off – except, of course, the workers, who always remained poor. It appeared that war had been very good for the economy.

The chief still had a hard time accepting this fact. But the Chief Economist emphasized that it was so. It was not possible to have economic growth forever. It was not possible for populations to increase forever. Under a hunter-gatherer system, large wars could never occur because the natural food supply was very limited, and human population never grew very large. With agriculture and civilization, however, human populations would always grow very large and to extreme limits. Peace could not continue forever. War was a necessary byproduct of agriculture and civilization. The process was a continuing cycle of building things, destroying them, and building them again. It was the same as with life itself. Nothing could live forever. In order to make room for each species' offspring, it was necessary for the older generation to die. Civilization was the same way. If a building, once built, remained forever, there would be less work for the people, and there would be less taxes for the king. In order for the kingdom to flourish, there had to be economic activity. And the more economic activity, the richer the king would become. In other words, from an economic viewpoint, it was much better to build things, and then destroy them in war, and build them again, than to build them only once.

The king finally agreed that what the Chief Economist said made sense.

At this point, our story changes pace. We shall leave the king and his kingdom, and travel forward in time, through history.

## Epilogue

### ***Years 1,000 – 6,000 (10,000 BC – 5,000 BC): War and Peace***

Over the next several thousands of years, agriculture and civilization spread around the world. As people spread to new areas of the world, they quickly filled it with people. Soon, wherever people went, there were too many people, and wars followed. Human history became the story of war and peace. Under peace, people would build villages and towns and cities, until there were too many people. Then, wars would occur to destroy what had been built, and the process of rebuilding would start over again. The cycle of war and peace continued. And after each war, what was built afterward was usually a little more sophisticated than what had been built before. People became more knowledgeable, and more skilled. This process continued until there were some really large civilizations on the planet.

## ***Years 6,000 – 9,000 (5,000 BC – 2,000 BC): Early Civilizations***

Starting about six or seven thousand years ago, some civilizations grew very large and powerful. The first major civilizations of historical times were the Sumerian and the Egyptian. The Sumerian civilization arose in the Tigris – Euphrates Valley (modern Iraq). The Sumerians invented writing and advanced all of the other major aspects of large civilizations: agriculture, architecture, large cities, metallurgy, mathematics and commerce. Egyptian civilization arose along the Nile River, in what is still called Egypt.

## ***Years 9,000 – 12,500 (2,000 BC – 1,500 AD): Later Civilizations***

Following the Sumerian example, other civilizations rose and fell, over the centuries and millennia. These included the Hittite and Babylonian civilizations. Other civilizations arose that were essentially independent of Sumer. These included the Minoan and Syrian civilizations in Asia Minor; the Sinic civilization in East Asia; the Indic civilization in South Asia; and the Andean and Mayan civilizations in the Western Hemisphere.

Starting about 1,000 BC, Hellenic (Greek) civilization arose, followed by Roman civilization. Hellenic (Greco-Roman) society spawned Western Civilization. The Syrian civilization parented the Iranian and Arabic civilizations, which fused to form Islamic society.

All of the preceding civilizations developed, advanced, or utilized the fundamental prerequisite for civilization, viz., agriculture. Without the tremendous food surplus that agriculture enables, there is no ability to invest labor into the activities on which a civilization depends. Civilizations varied in the extent to which they developed and advanced other features of civilization, such as metallurgy and mathematics. But all of them allocated much of their energy into waging war, since overpopulation and war were always the consequence of civilization, and any civilization that consistently lost its wars ceased to be. Whenever a civilization arose that surpassed its neighbors in the art of war, it invariably conquered its neighbors and either absorbed or merged with them, or destroyed them.

Since rulers realized that if they lost decisive wars, they would lose their kingdoms and their lives, they were very careful not to engage in all-out, all-or-nothing wars, if they could avoid them. Instead, they usually waged small wars that did not seriously threaten the survival of their kingdoms. In fact, waging war became one of the rulers' favorite pastimes. Every generation, it seemed, had its war – and not just because the population increased substantially in the interregnum peace. War became the sport of kings. The kings enjoyed the exhilaration of playing a grand game where the stakes were life and death – but for the peasants, not for them! In the period of preparation for war, economic times boomed. In the aftermath of war, economic times boomed. War was not only a necessary adjunct of civilization; it was exciting and immensely profitable.

Until about five hundred years ago (1500 AD), civilizations operated on very basic technology. They used simple metallurgy, such in the manufacture of bronze, brass, and iron, but they had little understanding of the scientific disciplines of chemistry, physics, and biology. Most of their products, in fact, were made of wood, leather and cloth, with limited use of metal. Then, about five hundred years ago, things began to change.

## ***Years 12,500 – 12,800 (1500 AD – 1800 AD): The Coal Age and the Birth of Modern Technology and Modern Civilization***

Starting about 500 years ago, mankind began to understand much more about the physical universe. A number of factors contributed to this movement. One of them, for example, was the need for energy. Growing human populations had destroyed much of the forest of Europe, and people were miserable. Then, about 1500, the king of England allowed them to use coal for heating. As coalmines grew deeper and deeper, the task of removing water from the mine became more and more difficult. This problem led eventually to the development of the steam engine.

Other developments occurred that contributed to the development of technology. Mankind came to accept that the concept that the world was round, and the quest to explore it received much attention. Columbus opened up the Western Hemisphere, and global trade exploded. An improved clock was developed, that enabled the measurement of longitude. The development of gunpowder dramatically changed the nature of warfare. The development of the printing press led to an explosion in the distribution of knowledge.

## ***Years 12,800 – 12,900 (1800AD –1900 AD): Industrialization***

Improvements in steel technology, and access to the energy of coal, enabled the development of railroads and very large structures (bridges, buildings). Mankind learned how to generate electricity, and to use it for communications, lighting, and motors. The nineteenth century observed a tremendous increase in scientific understanding and technological development. By the end of the century, the steamship and automobile had been developed, and the airplane would soon follow. Near the end of the nineteenth century, a new source of energy was discovered – oil. Oil contained the high concentration of energy that coal did, but because it was liquid, it was far more useful.

## ***Year 12,900 (1900 AD): The Oil Age***

The use of oil grew dramatically. Initially, oil was used as a convenient substitute for coal, in large engines, such as ocean ships and railroad locomotives. Then it was used to produce gasoline, which was used in automobiles, trucks, and airplanes. It was used to generate electricity. As chemistry developed, oil was not only used as a source of energy, but as a raw material for plastics and other modern materials. The energy from oil was used to vastly improve agricultural productivity, by providing the energy to mechanize farming; to mine and manufacture fertilizers, insecticides and herbicides; and to run irrigation systems. The energy from oil was used to vastly increase the mining and refining of minerals, and the distribution of agricultural and manufactured goods.

By the middle of the twentieth century, the oil age was in full force. The “Western” world advanced tremendously, and the standard of living of industrial societies increased tremendously. The ability to wage war on a grand scale increased dramatically. The industrialized nations of the world assumed full political control of the planet.

Because of advances in disease prevention, human population began to explode. In prehistoric times, the total human population of the planet was on the order of five to fifty million people. After the development of agriculture, it increased to a couple of hundred million. In 1500 AD, it was still about this size. But with the tapping of fossil fuels (coal, oil, and natural gas), human society was able to produce much more food than ever before. The population began to grow. By 1800 AD, it reached one billion. By 1925, it was two billion. By 1960, it was three billion. By 1974 it was four billion. By 1987 it was five billion. And by the year 1999, it passed the six billion mark.

### ***Year 13,000: Globalization: Gaia Gets Sick***

The rulers of the planet were delighted with the increased human population, with the development of technology, and with the increased availability of energy from fossil fuel. Increased populations meant increased wealth. Increased productivity from technology and the energy to run it mean vastly increased wealth. The leaders of the planet urged more and more economic development. They urged the destruction of forests, the destruction of wildlife, and the decimation of the stocks of fish in the sea. Industrialization produced massive amounts of pollution, which poisoned the land, the lakes and rivers, the seas, and the atmosphere.

The impact on the planet's other inhabitants was devastating. Under normal conditions, a few species go extinct each century. But with large human numbers and industrial activity, the number of species going extinct began to rise tremendously. Mankind was destroying natural habitat over most of the planet, and poisoning or slaughtering the decreasing populations of wild plants and animals at a horrific rate. From a few species per century, the number of species going extinct rose to more than 30,000 per year. Large human numbers and industrial activity were destroying the biosphere at an incredible rate. The production of large amounts of carbon dioxide, from the burning of fossil fuels, was threatening to change the world's climate.

And then, suddenly, it was all over. By the year 2004, approximately half of the planet's oil reserves had been exhausted. At current rates of consumption, oil was now beginning to being used up faster than it could be discovered and exploited. Unfortunately for most of humanity, their existence was totally dependent on the availability of the energy from oil. As the level of global oil production fell, and the human population continued to soar, global wars erupted. By the year 2050, all of the world's commercially extractable oil was gone. Human population fell from over six billion back to a few hundred million.

### ***Year 13,000+: Synarchic Planetary Management, and a Return to Hunter-Gatherer Society***

Mankind had learned a terrible lesson. It had destroyed a planet. Before the dawn of agriculture, mankind lived in a Garden-of-Eden paradise. Now, it lived in a polluted planet, devoid of most of its natural splendor – its wild plants and animals. What was to be done?

Using nuclear weapons, human society had destroyed many of its fabulous cities. Most of them, however, were simply empty, after the human population had starved to death. Would mankind simply rebuild, and continue to complete the destruction of the biosphere? It was certainly possible – the oil was gone, but the planet contained sufficient coal to support the energy requirements of a large-population, industrial world for a couple more centuries.

A tremendous conflict was waged between those who wanted to reindustrialize the planet, and continue the destruction of the biosphere, and those who wanted to develop a new human society that would live in harmony with the nature and the rest of the biosphere. The ones in favor of saving the planet wanted to set up a new system of planetary management. Before, human society was comprised of hundreds of independent (“sovereign”) nations, each striving to increase industrial production. This anarchic system was known as liberal, free-market democracy. It was an economist’s dream. It was the best known system for increasing production. Unfortunately, it was also the best known system for exploding human population and destroying a biosphere.

The alternative system proposed for managing a small planet was known as *synarchy*. The world *synarchy* means “joint rule,” or “together rule.” It was originally proposed by a French philosopher, the Marquis Joseph Alexandre Saint-Yves d’Alveydre, in the late 1800s. A longer definition was presented by Mikhael Aivanhov: “When the two powers of aristocracy and democracy are joined together, they give rise to a third power: *synarchy*, which means a power (Greek *arche*) which works with (Greek *syn*) aristocracy and democracy. This power is, of essence, hierarchical, by which we mean it is a spiritual and a sacred power.” Under a synarchic planetary management organization, human population is maintained at a low, long-term sustainable level. Mankind continues to thrive in a biosphere that is a Garden-of-Eden paradise. Since there is but a single nation on the planet, there is no longer any war. Since the human population is low, and global industrialization is no more, there is no longer gross intermingling of species. As a result, global epidemics, such as HIV/AIDS, cease to occur.

The “Time of Troubles” began for modern industrialized society when global oil production peaked, in 2004. Large-scale wars erupted, on a global scale. Modern industrial society could not function without oil, and so nations had nothing to lose by waging life-or-death destructive wars. After each wave of destruction, the decreased human population thought that it could last a while longer on the planet’s ever-dwindling oil supply. But the human population continued growing at an horrific rate, and all national leaders promised and strove for the increased industrial production that everyone wanted to produce material goods and make their lives more comfortable. And the planet’s biosphere had been so damaged that, increasingly, there was less and less to live on. As the Petroleum Age came to an end, the Industrial Age did also. The Industrial Age ended faster than anyone expected.

Some people saw what was happening, and they planned for a new, better world, after the modern industrial world collapsed. After discussion of many alternatives, it was agreed that the best solution for managing a small planet, such as Earth, was to set up a “Minimal-Regret” population, consisting of a geographically compact, high-technology, single nation of five million people, and a primitive, hunter-gatherer population of five million people, distributed over the planet. The purpose of the globally distributed population was to minimize the chance of a human extinction from a single local catastrophe. The purpose of the single-nation, high-technology society was to constrain the size of human population to a total of ten million.

The world had gone full circle. It had started out as a Garden-of-Eden paradise, with a small population of hunter-gatherers, leading healthy, exciting lives. Human society had embraced agriculture and economic development, where most people lived in desperate poverty and disease, having to earn their daily bread by the “sweat of their brow,” working for a few rich and powerful, in uninteresting, repetitive occupations. Humanity, through economics, had destroyed a planet’s environment, wiped out or decimated most wild species, and brought poverty, misery,

hardship, and disease to billions of people. Under economics, life for most people had been “nasty, brutish and short” (to borrow a phrase from Hobbes).

But now things were different. Under synarchy, with a low-population world governed by spiritual leaders – enlightened initiates – all people led meaningful, interesting, and healthy lives, in a delightful, Garden-of-Eden paradise. “A civilization without insanity, without economists and without war, where the able can prosper and honest beings can have rights, and where man is free to rise to greater heights,” to paraphrase Hubbard. And they lived happily ever after.

## References:

1. Wells, H. G. *An Outline of History: The Whole Story of Man, Volumes 1 and 2*, Doubleday and Company, Inc., New York, 1971
2. Toynbee, Arnold J., *A Study of History* (ten volumes), Abridgement by D. C. Somervell (two volumes), Oxford University Press, 1946
3. Diamond, Jared, *Gems, Guns and Steel: The Fates of Human Societies*, W. W. Norton & Company, New York, 1997
4. Steiner, Rudolf, *Cosmic Memory: Prehistory of Earth and Man* (essays written in 1904), translated from the German by Karl E. Zimmer, Harper & Row, Publishers, 1981 (e-book edition available on the Internet from the Rudolf Steiner Archives at <http://www.elib.com/SteinerBooks/> )
5. Bryson, Bill, *A Short History of Nearly Everything*, Doubleday, London, 2003, Black Swan Books, London, 2004