

CHAPTER 3

Society: The People Living Within a Culture



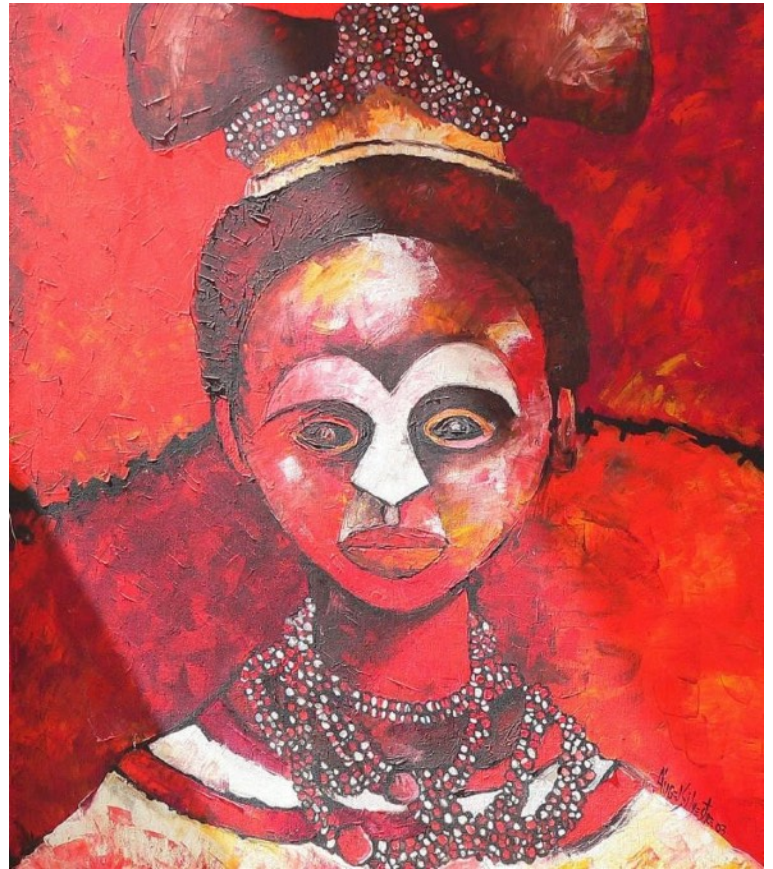
An African spirit predicts good fortune by showing her 3 middle fingers. Most Voodoo followers now reside in Caribbean nations, having been removed from most of Africa by the slave trade. All societies were organized around some form of superstition until this century, and these influences remain everywhere.

However you may view the Universe, it is a brain-rattling concept to grasp all at once. Especially its numbers: the physical Universe is estimated to be at least ten billion years old, containing an *infinite* number of galaxies with each galaxy containing hundreds of billions of stars. And – although they are usually too small to spot even with the magnificent new James Webb Space Telescope – there are likely to be planets revolving around many of these stars.

Oh, but strap in! As you read this, you are seated on a rather small but very beautiful blue planet. Our Earth is spinning on its axis at nearly 1000 miles per hour, and you are along for the ride. But you and the planet you were born on are not merely spinning in place. You are also *spiraling through* space like a football, circling around the gravity field of a tiny star that warms you from 93 million miles away.

HUMAN AND SOCIETAL EVOLUTION

I am a sociologist, not an astronomer. The sociological point I wish to make above is how different cultures have interpreted the awesome physical reality of our Universe. Across time, *thousands* of ancient human cultures on Earth created their own unique explanation of the Universe, and the human purpose in it. These wildly different versions were not founded on objective data, for the scientific method and the evidence it produces only emerged in the last few centuries.



These rarely seen religious images often baffle people who are only familiar with their own religious stories and images. The creation stories of hundreds of religions were lost during military conquest and genocide.

The same scientific method that allowed humans to walk on the moon, to design your cell phone, to create vaccines and find deposits of natural gas miles below the Earth's surface have been employed in the last century in a search for a logical explanation for the Universe, and the origins of humanity. Evidence of early human activity has been gathered on all continents, discussed and debated.

The chief fields of this scientific study of your ancestors have been:

1. Geology, the study of the physical Earth.
2. Biology, the study of life forms (especially genetic research).
3. Paleontology, the study of the fossilized remains of our ancestors.
4. Anthropology and sociology, the structure and evolution of societies.

Human evolution is still a controversial subject, for the ancient Western religious institutions placed humans in a special step on the ladder of existence; we were above the rest of the animal world and given dominion over it all. But we were placed beneath divinity. The explanation of creation was promoted as an *absolute* truth, *not to be contradicted*. When the Biblical timeline and the book of Genesis was challenged by fantastically different scientific explanations of planetary and human origins, everyday citizens were faced with a difficult choice.

In 1859, as the Civil War was about to break out in our nation, British scientist Charles Darwin published his classic work, *On the Origin of the Species*. Darwin suggested all forms of life were a result of continuous changes over time in which new and complex species gradually emerged from older ones, as they fine-tuned their adaptation to their physical environment. There was plenty of evidence for this.

But Darwin happened to have been an ordained minister in the (Protestant) Church of England. He knew that he was treading on thin ice with a still powerful religious presence throughout Europe. In fact, he omitted any mention of human beings in his early writings, and instead concentrated on the evolution of worms and moths to protect himself from direct personal attacks. But the important scientific players knew what Darwin was driving at, and so did the clergy.

Darwin's *Origin of the Species* organized an already growing body of scientific evidence that could not be explained in any other way. Had he not published a book with this theme, someone else soon would have. The religious outcry was angry and immediate. An intense and spirited debate began that continues to this day in the USA.

The institution of science is a newcomer to the institutional framework of culture; science is often seen as the "bad boy" in the institutional family, contradicting its sacred beliefs.

But its achievements have been so spectacular that the other institutions had to respect it. In recent decades, the Jewish, Catholic and *some* Protestant faiths - have officially accepted the theory of evolution as fact, including the timeline. However, in some cases their religious interpretation has now shifted to suggest that *human evolution is God's own process* and is not a random process.

"Creationists" - Biblical adherents who reject the theory of evolution- have pointed out that scientists are still debating the accuracy of their theory. That is true. But this scientific debate on the *details* of a theory is a normal part of the scientific method as new data helps scientists close in on the fine points of an ancient and complex process. The scientific community is unanimous in support of the *general* concept of evolution.[1]

In April of 2003, the mapping of the entire human gene structure was completed by the Human Genome Project, an international body of top scientists from Europe, Japan and the United States.[2] The Project's discoveries added to a body of knowledge that confirms in a fundamental way the close genetic relationship between all life forms. It was also discovered that every human alive today has African ancestors.



Young Charles Darwin in the 1860s.



Genetically, all human DNA has been traced back to Eastern Africa.

The remaining opponents of the theory of human evolution are mainly the leaders of Protestant faiths located mostly in the midwestern and southern United States. Their followers constitute about 1/3 of our nation's population. If you, the reader, are a member of a creationist faith, rest assured that a basic *knowledge* of evolutionary theory - and not your personal *acceptance* - is all that is required for success in sociology classes. You have my admiration for showing the courage to consider challenging new ideas.

The science of evolution is ongoing but enough is known at this point that it is possible to summarize the *basic* history of planetary and human evolution. It appears to geologists that our planet Earth is almost 5 billion years old, an inconceivable stretch of time, to be sure. Only in the last 10% of that timeline did the first land creatures emerge from the oceans, as the amphibians crawled out onto land. Mammals evolved from those reptiles relatively recently, only 200 million years ago. The first apes emerged about 70 million years ago, and human-like apes were not seen until about 4 million years ago.

A controversy pops up as scientists try to establish *when* humans emerged from apes because this is a *subjective* judgment. Science cannot resolve it exactly. However, the modern version of *Homo Sapiens* - nearly hairless, upright walking, tool-using, family-forming, self aware and intelligent social animals – seem sufficiently human that social scientists often start the story of humanity at their entrance on the planetary stage.

DEFINING SOCIETY

Society – the people living *within* a culture – is a simple definition compared to culture. “Society” and “culture” are terms that are often used interchangeably in casual conversation but should not be in sociology. The difference is huge and important for those who discuss these issues in a serious way.



Photo by Gary Payne 2010

Inside Ethiopia's National Museum my wife Mary Rosenberg poses in a similar stance to the skeleton of "Lucy," our most famous early ancestor. Lucy lived 3.2 million years ago but her bones, skull and teeth indicate she was of a more human design than earlier apes...she represents one step in a very long process. Recently, human genome tests have confirmed the already existing skeletal evidence: all humans evolved from African apes, and chimpanzees in particular.

Six Societies in Time Order

Civilizations come and go. They all eventually collapse, sometimes very quickly. Sociologists seek to avoid this fate for our civilization by learning the hard lessons that past civilizations ignored. We must first understand how societies function over long time periods. **Sociologists and anthropologists have noted that societies have tended to fit into six basic survival strategies. We define each society type here by its strategy for economic survival.** Below, all six are described, in rough time-order of their emergence on Earth.

Hunting-Gathering Societies

We are apes, and apes are *omnivores*. An omnivore will eat almost anything: meat, fish, plants, nuts, reptiles, insects and fungus. The chimpanzee diet was similar to the earlier hunter-gatherer humans, but humans were clever at storing food, and at tool-using techniques, which eventually allowed them to travel around the globe.

Hunter-gatherers constitute the oldest societal form known, by far *the most successful society in terms of longevity*. A key part of their success was using cooperation and sharing as a survival strategy. The family is the key institution for hunter-gatherers, for in terms of size, their societies are microscopic by our standards, usually numbering less than 100 individuals in a **band – a combination of families formed into a close-knit kinship group.**

These bands were usually small because they might otherwise over-harvest areas they resided on. There was little or no government to administrate the distribution of wealth. And material wealth was a liability, because it was so much trouble moving it from place to place. *Sharing* made sense to avoid scarcity and encourage harmony within the hunting band. **Therefore, it is fair to say that most of human history is dominated by sharing and cooperation in hunter-gatherer societies.**

By comparison, our highly *competitive* and rather selfish modern society is quite new and unusual in evolutionary terms. Yet - since very few of us have experienced life in a cooperative society - widespread poverty in a nation of extreme wealth seems “normal.” After all, what other economic reality have we known?

The image many of us hold of our ancient hunting-gathering ancestors is often one of constant struggle, deprivation, and ignorance. Hunter-gatherers have been portrayed in our history books, cartoons and in Hollywood productions as primitive and savage. Government officials, beginning with Columbus, viewed them mostly as targets for slavery. Some missionaries I have interacted with often view them as potential converts, assuming that *their* traditional religious views are incorrect or irrelevant.

Since the hunter-gatherer economic strategy reaches all the way back into pre-history, hunter-gatherers do have traditions that may be considered barbaric or illogical. However, that criticism could be leveled at almost any modern society.

Hunter-gatherers were no less intelligent than citizens of other human societies but they had much less access to objective information. Social scientists (including myself) who have interacted with any of the few remaining groups on their own turf are often stunned at the depth of their understanding of the natural environment, and at the grace with which they raise their families and interact with one another and strangers. They remain so today, in the rapidly shrinking areas where they have not been molested by environmental destruction of their traditional settlement areas.



Sayer Payne 2013

Hunter gatherers we refer to as Aborigines or American Indians created this fine artwork many centuries ago in what is now known as Capitol Reef National Park in southern Utah. Ironically, this rare petroglyph was degraded by today's modern hunters who chose to shoot bullets into these priceless carvings, degrading them forever. But the huge size and competency of this art indicates the artists belonged to a society with a lifestyle that was efficient enough to allow substantial leisure time, a form of real wealth.

True, many hunter-gatherers are *without knowledge* of much of our modern world. But the reverse is also true; most of us from the industrialized societies are *without knowledge* of how to feed ourselves and stay alive in *any* natural environment. This was even true of the hardy white Europeans who settled at Jamestown, Virginia in the 1600s. In less than a decade, 90% had starved to death despite having located in what the local American Indians considered a natural resource paradise. These white settlers at Jamestown were not ignorant people; they had merely wandered too far outside of their cultural and geographic "knowledge zone." Some survived by running off to join Indian communities while others stayed in the failing white settlements and ate their dead family members to get through the winters.[3]

Thus, standards of "intelligence" are relative to history's quirks and environmental circumstances. No society is inherently ignorant, for none could have survived for so long in such a disadvantaged state. It would be more accurate (and less ethnocentric)

to suggest that each society understands some things very well, and other things not at all. Thus, human intelligence *has a context* that cannot be measured by “IQ” tests.

Statuses were relatively equal for women and men in hunter-gathering societies, although women were more likely to gather than hunt, and political leaders were more likely to be men. Band leaders had little authority over the band membership, and their prestige did not lead to vastly greater material wealth. The terms “rich” and “poor” would not translate well into the reality they created, which because of its higher equality, we would define as “egalitarian.” Perhaps for this reason, serious interpersonal violence and warfare was generally rare or mild among and between hunter-gatherer societies. They were very good at sharing. Early films of hunter-gatherer group disputes suggest that an intense group discussion was usually (though not always) enough to settle disputes.

Pastoral Societies

As hunter-gatherers became more sophisticated, some began to experiment with **pastoral society – an economic strategy that depended on domestication of the wild animals that they had formerly hunted**. This allowed humans to inhabit otherwise desolate and non-productive arid regions in the Middle East and elsewhere that were too dry to sustain a human population of hunters or cultivators, but could be grazed by sheep, goats, reindeer, caribou or camels.

This strategy was more economically effective than hunting and gathering, as the herd could be expanded to the limits of the carrying capacity of the land. This created a *surplus* that could be traded or sold for the first basic forms of material wealth: gold, spices, fine cloth and objects of art...but gradually, it included weapons and slaves.

This new wealth heralded the rise of small but *permanent* human settlements and the merchants, craftsmen, artists and political and religious institutions that were made possible because of a money economy. It also meant the beginning of higher *inequality* between groups and individuals. Pastoralists eventually had to confront competition from expanding pastoral populations over grazing and water rights. The religious literature that developed in this period – Judaic, Christian and Islamic (in time order) – tended to focus on human politics, supporting both warfare and enslavement of humans outside their membership. Here are some examples from the holy book of Islam, the Koran:

(98:1) Unbelievers in Allah, particularly Jews, Christians and pagans shall burn in hell, they are the vilest of all creatures.

(3:85) He that chooses a religion other than Islam, it will not be accepted and in the world to come he will be one of the lost.

(3:110) Had Christians and Jews accepted Islam, it would have surely been better for them. Few of them are true believers, and most of them are evil doers.

(5:51) Take not the Jews and the Christians for friends.....He among you who taketh them for friends is (one) of them.

Examples from the (Life Application) Bible:

Old Testament; Leviticus

(25:44) You may purchase slaves from the foreign nations living around you.

(25:45) You may purchase the children of the foreigners living among you, even though they have been born in your land. They will be permanent slaves for you to pass on to your children after you.

New Testament; 1st Peter

(2:18-20) Servants, you must respect your masters and do whatever they tell you even if they are tough and cruel. Praise the Lord if you are punished for doing right. You get no credit for being patient if you are beaten for doing wrong; but if you do right and suffer for it and are still patient beneath the blows, God is well pleased.



Gary Payne 2005

In Morocco, we met this friendly shepherd at the top of a remote mountain, living a pastoral life. The sheep harvest the grass, the herders harvest the wool and meat. It's a clever way for humans to exploit arid regions that are otherwise too dry to live in. But Morocco is being dangerously over-grazed. Like us, Moroccans are rapidly depleting their natural environment. Cultural institutions are often too slow to respond to needed changes. I refer to that as phenomenon as "cultural inertia."

The ethnocentricity in all these religious writings set the stage for wars that still rage today, often in the same territories. Even so, pastoral societies were generally less warlike than the societies that came later. A few pastoral societies still exist today in the Middle East, Africa, Spain and parts of Asia.

Horticultural Societies

In the tropical areas of high fertility which straddle the equator, (particularly Central and South America and parts of Asia), another type of economic strategy emerged at about the same time as the pastoral societies: **Horticulture – the domestication of wild plant species used in “slash and burn” gardening.** There are still a very few societies surviving purely on horticulture today, mostly in tropical areas in the Amazon and Indonesia.

A typical horticulture society first selects an appropriate spot in a tropical forest to raise domesticated plants. In the dry season, some of the brushy material at ground level is slashed down and set ablaze, turning trees and brush into a rich ash which is spread around to fertilize the crops. The site's fertility is only sufficient for a few years. When it plays out, a horticultural society selects another nearby spot to restart the cycle.

It was an efficient economic strategy. As with pastoral societies, a food surplus could be produced that triggered a far more complex culture than hunter-gathering had allowed. And the need for migration was less frequent than in pastoral or hunting-gathering societies. This semi-permanent location strategy enabled some dramatic artistic and architectural advances. Village settlement populations were larger. Active trading of food surpluses and intermarriage between villages began to link villages to each other, and finally into larger units of human organization we call tribes or “city-states.”

Complex political and religious institutions emerged. Chieftainships were usually selected by heredity. In order to protect their family dynasty, leaders tended to demand high levels of obedience and loyalty from individual citizens. Rituals including human sacrifice and cannibalism flourished in religious ceremonies. The Maya, for example, held sports rituals in which the players were expected to voluntarily allow their rulers to drink the winner's blood in sacrifices at a public gathering. It was portrayed as an honor by the ruling families that claimed to be divine.

Yet the Maya and South America's Inca nations must also be measured in more complimentary ways. Their domestication of wild plant species resulted in a huge variety of foods the modern world takes for granted today. Corn, beans, potatoes, pumpkins, squash, tomatoes and chocolate are just a few of their many gifts to humanity.[4] The Maya developed effective techniques of brain surgery to remove parasites, they understood the movement of the planets and stars earlier than their Western European counterparts of the time.

It could therefore be said that horticulturalists created grand empires, fantastic art and architecture, and magnificent agricultural achievements. But horticulture practices also led to the downfall of many of their civilizations. Research suggests that, as populations rose, some horticultural societies depleted their forests, which led to the drying out of the watersheds they depended on. By the time Columbus arrived in the Americas, the Maya had been in gradual decline as a civilization for five centuries.



The success of horticultural society is apparent in these magnificent Mayan ruins in Palenque, Mexico which are still standing even after having been deserted through several centuries of earthquakes and torrential rains.



Photos by Gary and Sayer Payne, circa 2001 Above: Palenque Below: San Cristobal de las Casas, Mexico

The descendants of the Maya still inhabit southern Mexico and a portion of their population still clings to what remains of Mayan culture.

Agricultural Societies

About 6,000 years ago, humans in fertile and temperate areas began to replace their digging sticks and other crude implements with *the plow*, an invention which triggered an enormous turn in human history. **An Agricultural society is an economic strategy that harnesses energy to the plow and operates in a permanent location.**

Harnessing animal energy greatly boosted the speed and productivity of human efforts. The plow was also able to cut deep enough into the soil to completely uproot and bury wild and unwanted vegetation that had previously competed with their crops for space, water and nutrients. Farmers could thereby access a fresh layer of bare topsoil, perfect for planting heavy yielding crops.



Gary Payne 2010

Basic plowing methods are still in use here in Ethiopia. Long periods of drought are ravaging this part of northeastern Africa. Normal weather patterns seem to have been disrupted by climate change. This farmer was actually racing to plow and plant following a brief rain in January, which had been previously considered to be the “dry” season.

Material wealth holdings skyrocketed in agricultural societies as the practicality of material ownership increased. Since agriculture was done in a permanent location, migration was no longer necessary. Thus, material wealth could be forever *stored* in almost unlimited quantities. There was no longer a need to carry it all around as in previous societies that were engaged in periodic migration. The age of materialism, which began in pastoral societies, rose to a new level.

Crop yields soared in many regions, and farmers were able to produce more than enough food for their families. These surpluses of food allowed a very substantial part of the human population to do other things besides farming. As an increasing portion of humanity left food production for other forms of work, a society of efficient specialists began to emerge: bricklayers, carpenters, artists, teachers, and inventors of new technology.

Rapidly growing cities full of non-agricultural workers popped up across continents and were bound together in nation states. Basic middle-class public education began to emerge along with very high levels of education for wealthy families. This knowledge triggered architectural and artistic projects that were more sophisticated and complex. In short, a highly developed culture rose under this wildly productive new agricultural survival strategy.

Agricultural societies had much to offer, but there were – and still are – very serious problems with this survival strategy. The distinct social classes that emerged allowed landowning elites to seize political and economic control over the majority of humanity, especially poor citizens and slaves who remained landless and uneducated.

The agricultural-based slave trade grew into a gigantic global enterprise, protected by governments and supported by dominant religious institutions. Across more than three centuries, *tens of millions* of Africa's healthiest people were captured and ferried against their will across the Atlantic Ocean to the Americas. This catastrophic violation of human rights remains a largely ignored chapter in history. Little to nothing has been done to mitigate the damages to the descendants of individual victims or to the African nations that still suffer unthinkable exploitation and impoverished servitude.

Agricultural societies were often at war with each other over water rights and territorial boundaries. Their poorer citizens were encouraged or even forced to fight the wars for landowning elites, and new and deadlier forms of technological warfare raised the stakes higher for each conflict.

The plow, which made all this possible, created its own problems. Plowing a *permanent* location – repeatedly, year after year – depleted the topsoil. Even the most fertile terrain could not support a human population forever under the plow, or for that matter, under the irrigation schemes that followed. Some of the ancient and most fertile fields of the Middle East were plowed and irrigated into deserts and salt flats long ago, including what had been known as the magnificent “fertile crescent.” That trend is in progress today in the agricultural areas of Midwestern USA. The forests removed for

crop production, the wind and water erosion of winter-bare plowed soils and the depletion of groundwater from irrigation is threatening to turn a large portion of our nation into a dust bowl.



Photo by Gary Payne 2010

These kids in Somalia are the survivors of centuries of agricultural slavery on the continent of Africa. France, Britain and Italy all occupied large sections of the African nation in the 1800s and used Somalis as slaves. The last of the colonizers to leave were the British in 1960. But the USA began to take sides in Somali affairs in the 1990s and in year 2007 President George W. Bush attempted to assassinate several of its leaders with cruise missiles.[5] Very few citizens of the USA know this history or why so many Somali refugees fled their impoverished nation to migrate to the USA.

Industrial Society

An industrial society is one which depends on *heavy mechanized production*.

Had it not been for the agricultural success mentioned above, the industrial society might not have existed. But with huge food surpluses came the opportunity for fortunate citizens to educate themselves to study physics, mathematics, electronics and engineering.

A wave of invention swept across England, Europe and the USA creating a multitude of clever devices and machines with this knowledge. The Industrial Revolution is only 300 years old. But even the most high-tech societies of the present were still dominated by agriculture until the year 1900. Thus, it seems appropriate for us to mark the true domination of industrial societies as (roughly) a mere century ago.

And what a century it has been. A tiny portion of the human population, equipped with machines that replaced animal power, gradually learned to produce food so efficiently that most of humankind moved into large cities and abandoned the stable rural lifestyle agriculture had allowed. This trend of *urbanization* reversed the social organization of the human population. Rapid social changes ripped at the fabric of society. Families began a century-long trend of coming unglued, just as sociologist Emile Durkheim had predicted in his book, *The Division of Labor in Society*, published in 1893. The evidence could be seen, for example, in much higher rates of indicators like divorce, migration and crime.

Durkheim lived at the beginning of the transition from agricultural societies to industrial society in Europe, which he observed closely. He noted that “**anomie**” – **a condition of normlessness and social breakdown** had taken place, as the commonality of very similar people with similar values in rural farm communities faded away, into the new age of specialization and urban living. But he also noted that a new larger-scale social order formed in the industrial society. This new industrial society was held together only because of the *dependence* of specialists on each other to perform the new complicated tasks of life. The knowledge of each specialist was substantial, but it was limited to his or her narrow specialty. Since specialists couldn’t do everything for themselves, they needed each other’s special knowledge and services. This social glue was not nearly as strong as that which had existed in tight-knit rural families and communities. It did hold society together...but very loosely.

Despite these drawbacks, few citizens wished to return to the farm. Specialization in industrial society brought fascinating technological wonders at prices the middle class could afford. The productive efficiency of energy-driven machinery saved enough time to allow nearly the entire human population of an industrial society to attend school and become literate for the first time in history. In fact, public education became *mandatory*, for industrial societies *require* highly educated citizens to operate complex processes. The increase in knowledge, travel, personal wealth and lifespan was enormously appealing. And the boost in material productivity provided a bounty of wealth that also fostered a growing demand for human rights. In the 20th century, child labor laws passed, *formal* slavery was abolished (at least in the industrial nations), and basic rights for women and minorities improved.

Although families and communities continued to break down, governments of industrial societies began to accept some of the new responsibilities for protecting vulnerable citizens. All the modern industrial nations are today referred to as “welfare states,” in that they provide several forms of economic aid to citizens in need, although the forms and levels vary greatly from nation to nation and state to state. Today’s examples include Social Security for elderly citizens, Medicaid for poor citizens, educational grants/tuition subsidies for students and Head Start programs for children in the United States. These welfare-oriented programs have helped to make up for the loss of family and community support for individuals.

Nevertheless, industrial society has a very uncertain future. The costs to the natural environment have been enormous. In an industrial society, *consumption* becomes a goal in itself. That is, the economic requirement of this form of society tends to become the collection and disposal of material things. The more *things* that are owned or used, the more can be manufactured, and the more profits, jobs and potential wages can be generated in the process. Although this seems to be a happy cycle of events, when billions of people engage in this consumptive lifestyle it places an unprecedented strain on a small planet's natural resources in several ways:

1. Supplies of raw materials for products require mining, deforestation and/or exploitation of many other natural resources at extreme levels.
2. The production and use of industrial products pollute air and water and are rapidly destabilizing the climate. Even simple, non-toxic products – and their packages – when sold in billions of units, become huge waste liabilities.
3. Wars over scarce resources are inevitable at such high rates of consumption, since the economies of industrialized nations become dependent on materials for their existence. Global resource-related wars that began with the battle of European nations to steal Africa's treasures (World War 1) now have the potential to ignite the ultimate world war disaster between competing nuclear powers.



Photo by Sayer Payne, 2002

For as far as the eye can see, these forestlands in southern Ecuador's Amazon were stripped of trees by U.S. timber corporations. The Indigenous communities disappeared because the resulting soil erosion choked their streams, killed the fish, and made stream waters unfit for drinking. Some new refugees, fleeing this destruction, found their way across U.S. borders. Environmental destruction has helped trigger the highest global migration rate in history. More citizens have left their homelands in the last ten years than in all human history combined. Yet these immigrants are often seen as, the "problem."

There is ample evidence that – despite its glorious achievements – industrial society will be a relatively brief experiment in human history. A large portion of Earth's *easily accessed* minerals, metals, fish resources and old growth forests have already been consumed. The remainder will tend to be expensive to access in every sense of the word. Yet few wealthy nations are taking serious steps to avoid this collision with the realities of disappearing resources.

Industrial societies are reluctant to address their unsustainable activities because the changes required are so vast and unfamiliar. Government institutions are paralyzed at the prospect of beginning a transition to new economic strategies. And nurturing that paralysis from behind the scenes are financial interests that profit from the present extreme levels of consumption and waste.

Educational institutions have also failed to meet this challenge. The public in the USA is poorly informed on environmental issues. Few courses on environmental issues exist or are required in our high schools and higher learning institutions. This consequent lack of understanding ensures that few of us are willing to have our personal comforts or present options reduced to avoid complex future threats we do not even recognize. Thus, whatever changes enlightened leaders might suggest will probably not be popular, and thus may not be implemented in time to avoid a chaotic future.



Photo by Gary Payne, Chile 2023

Increasing climate disasters are finally waking *some* nations up to the race to save the planet. Chile is placing giant wind farms in the desert along its Pacific Coast to reduce carbon emissions. Solar panels can also be placed beneath the turbines in these areas. Foreign visitors and Chilean families like the one in this picture stop to view these hopeful projects that the government created this observation area for them.

Post-Industrial Society

A half century ago, sociologists noted a fundamental economic shift in wealthy nations; it was a gradual shift from “industrial” occupations to “service” occupations. Heavy mechanized industries had begun to move from rich nations like the USA to lesser developed nations like China, Mexico and Bangladesh. Corporations were shifting their manufacturing plants overseas to poor nations because labor was far cheaper and environmental pollution restrictions on dirty manufacturing processes were minimal or even non-existent. The rich nations were losing their industrial jobs.

Here in the USA this exodus of manufacturing created an employment vacuum. The desire for better profits overseas had given birth to a new societal strategy: **Post-industrial society is a society that subsists mostly on a service economy.** As the industrial operations moved offshore, the nations of Europe, the USA and Japan experienced a growth in *service* industries and occupations: salesclerks, hamburger-flippers, hairstylists, carpet shampooers, insurance agents, and so many others who *serve people* for a living rather than manufacture things, as was done in industrial society.

Simply put, in a post-industrial society we tend to re-circulate the wealth that had already been accumulated in our society, as we serve each other. It does not work out perfectly. Since nations like China, Vietnam and Mexico are making much of what we post-industrialists consume – cell phones, cars, cameras, etc. – we must send our wealth overseas to buy these goods at a far greater rate than they buy from us. The result is a growing *trade deficit* between the USA and the rest of the world. The wealth of a post-industrial nation tends to be gradually siphoned off to global stockholders of corporations that operate in poorer countries and to their overseas agents.

The USA is still somewhat engaged in heavy mechanized production, so the transition to post-industrial society is not at all complete. But the trade deficit is not the only problem with post-industrial society. Despite recent increases in wages in the USA and other post-industrial nations, wages remain rather flat if adjusted for inflation’s effects. Service jobs tend not to pay as well as manufacturing jobs. Families and individuals have had to work more hours each year. U.S. citizens already work more hours than citizens of any other modern democratic nation according to the Federal Reserve Bank of Minneapolis.

In the poor nations where manufacturing has relocated, a new form of slavery which often focuses primarily on children and young women is emerging. ***De facto* slavery is an informal type of slavery** which is hidden by corporations engaged in it, but which exists nonetheless. It cannot be described as *formal* slavery because the new laborers are not *owned* by anyone. They “volunteer” for these jobs which removes some of the stigma of misusing these workers. But *de facto* slavery is usually found in nations where populations are so economically desperate that corporations know the citizens will be *forced* to “volunteer” for any job, however miserable, at almost any wage.



The Organization for Economic Cooperation and Development data demonstrate that citizens of the USA work more hours than any other developed modern democracy. Decades ago, Japan had led the world in hours worked but during my lifetime the positions have reversed.

Human rights organizations have documented that workers in poor nations are frequently beaten, sexually exploited, forced to abort their pregnancies, suffer intolerable working conditions, and are paid only that which is required to sustain life.[6] Since *de facto* slavery is concentrated mostly in poor countries, consumers in the wealthier post-industrial nations know little about it and have therefore tolerated this trend towards an increasing enslavement of humanity.

Planning a Sustainable Society

One thing all six societies have in common is that *they were largely unplanned*, at least, for purposes of long-term social survival. They simply evolved. No amount of fine-tuning is likely to solve the enormous appetite for resource consumption of industrial or post-industrial societies. **The younger generation of students reading this book will find themselves facing the historic challenge of fundamentally reinventing their civilization.** Thus, the subtitle of this text: Rethinking Civilization.

Calamities are not new to humanity. The difference is the speed at which we are now approaching widespread weather instability and the depletion of basic resources like clean fresh water, fish stocks and forests. It is difficult to overstate what running out of these resources means to our future.

Fortunately, your generation has several advantages that could help *plan a transition* to societies that could be sustained indefinitely:

1. You have the example of previous failures to learn from.
2. You have the scientific method and the technology to understand our options.
3. You have a vast educational institution that could be redesigned to help you.
4. Your elders are *beginning* to realize that you have no other survival option.

An example of the use of science to define and remedy these problems can be seen in one of the original cancer atlas maps posted immediately below this paragraph. By the use of this map – dating back to 1970 - scientists first demonstrated that huge geographical variations existed in county respiratory cancer *rates*. The counties in red zones had the highest rates, year after year. These counties were often situated near industrial centers (particularly oil refineries). Obviously, several types of cancer were not a random occurrence, but rather an outcome of inappropriate human activity. Scientific data, when government chose to use it to create the Clean Air Act, encouraged policies that greatly improved our quality of life in the USA. It is this *scientific* approach to government regulation that is needed now to assure global survival.

FIGURE 3.1: A CANCER ATLAS MAP THAT MADE A DIFFERENCE

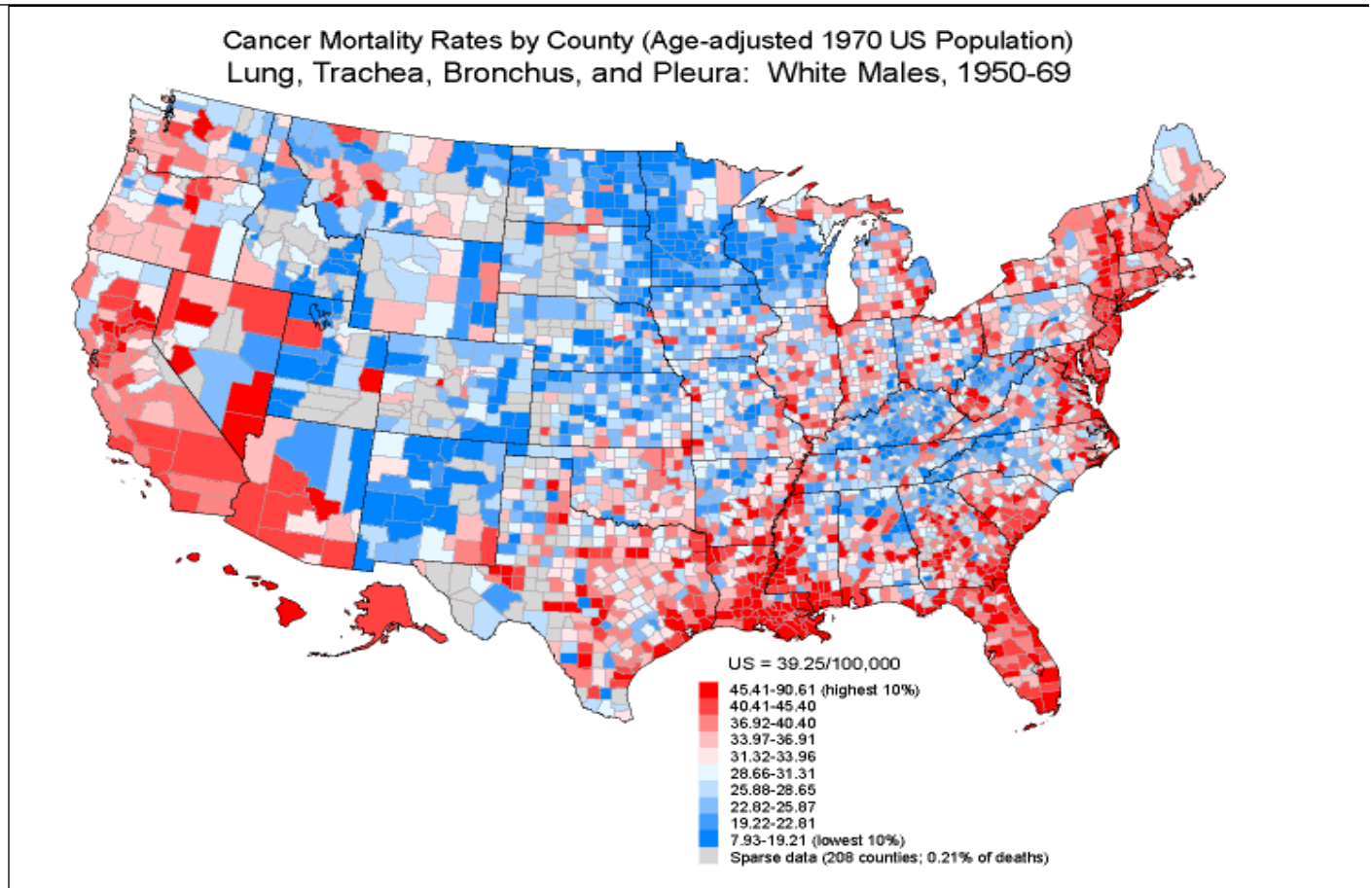


TABLE 3.1: A Simple Timeline of Societies by Strategy

SOCIETY	BEGAN	SURVIVAL STRATEGY
Hunting-gathering	Dawn of Humanity	Subsists on hunting wild animals and vegetation. Periodic migration.
Pastoral	12,000BP	Relies on wild or domesticated herd animals. Periodic migration.
Horticultural	10,000BP	Domesticates crops in “slash & burn” gardening, migration is lower
Agricultural	6,000BP	Growing crops in a <i>permanent</i> location. Use of the plow, irrigation, fencing.
Industrial	100BP	Heavy mechanized production with aggressive use of natural resources.
Post-industrial	50BP	A <i>service</i> economy dominates.

You can see above the *pace* of societal change is accelerating. The younger readers of this book will be living in a dramatically different society within a decade or two given today’s rate of political upheaval, technical advances, the accelerating effects of climate change, shifting behavior to prevent environmental breakdown, budget deficits, and the threat of war. New approaches to survival will be added to the above timeline.

One dangerous notion being promoted recently - by billionaires including (photo) Elon Musk - for avoiding Earth’s crises is to find a new home on another planet in our solar system. Mars is often cited as the most likely. Would we title this *Extraterrestrial society*?

But 8 billion people aren’t going anywhere on spaceships. The idea itself is a threat to our survival because it distracts us from coming to grips with our options on Earth, our ancestral home.

At the end of this chapter I have added a satire on this subject I wrote for the Minneapolis Star Tribune, an Op-ed published in 2023. It fits.





Photo by Gary Payne, 2023 Chile's NW coast

Here's a closer look at that Chilean wind farm. As the strong winds across the Pacific hit the coast they spin all these turbines at once. It's a hopeful development of which Chileans are very proud. We in the USA are expanding our wind energy projects too. But we need to ramp up far more quickly on wind, solar, geothermal and other passive sources.

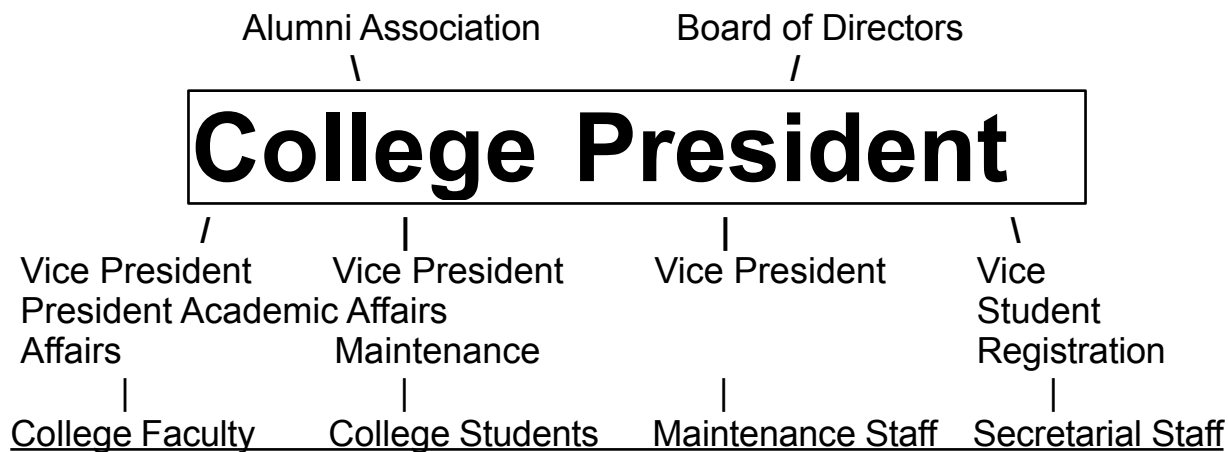
SOCIAL STRUCTURE

Every society has a distinct *order*, although it may not seem like it at times to its members. We take this social order for granted and therefore tend to only notice the disorderly side of life. All members of all groups have parts to play in this order even if, as students for example, we are only expected to sit quietly and stare at the professor during class. We rarely think about – much less question – this order.

But if we diagramed the relationships of the various groups any of us belong to, we could sketch out what is often called a **social structure – an underlying pattern of social relationships**. If we studied each other's personal diagrams, we would begin to see that these structures are *not* random, there are *patterns of authority* in interaction (again, a certain *order*, if we look closely).

The design of these social structures have huge consequences for our freedom, happiness, and self esteem. Below is a complex one.

FIGURE 3.2: A SOCIAL STRUCTURE SURROUNDING A COLLEGE PRESIDENT



This typical college structure could be sketched out in much greater detail, allowing us to measure the distribution of power and privilege in several ways:

1. The salaries of each of the paid positions in the diagram.
2. How many secretaries each Vice President is assigned.
3. The budget that each Vice President is allotted to operate a particular division.
4. Which members are given larger offices or an office with a window.
5. Who uses the “private” bathrooms and who uses the general bathrooms.
6. Which floor each person is located on.

These bureaucratic designs can be very complex but understanding them can be crucial – and revealing - for those working inside any formal social structure. We’ll dig deeper into these structures in Chapter 6.

STATUSES AND ROLES

An individual’s power and authority in any group is set by an individual’s **status – a position in society**. Higher statuses generally correspond to higher power and/or benefits in any social arrangement. For example, a college is a social arrangement. If we simply sketched out the status relationships (See Figure 3.2), we see patterns right away: levels of authority arranged top to bottom, and duties separated into categories.

Master Status - There are many forms of status. But one type of status dominates all the others: **the master status – the status an individual is most known by**. The master status in the USA is almost always the *occupational* status of the individual, as this is considered the primary indicator of social identity. This is probably because our occupations reveal more about our chances for reaching the material goals – in our very materialistic society – than any other status that we hold. Thus, in introductions, we are usually asked right up front, “What do you *do*?” It’s an intrusive question, and the answer will often rank us permanently during a conversation.



Photo by Gary Payne Casa Blanca, Morocco 2005

This female police officer (right) has broken through an historic occupational barrier for women in Morocco. But at home she may be expected by her husband to wear a veil. Her family and religious institutions may not have caught up with her government's recent progressive policy towards women's rights and roles.

In less-developed agricultural societies in which occupational specialization is not as entrenched as in the United States, it is unusual to be asked about one's occupation during introductions, or at any other time, especially in rural areas. In these societies, the family is valued more highly than any other aspect of social life, and conversations with foreigners from modern industrial societies will often reflect that.

Ascribed Status – is the status *given* to an individual at birth. The individual has little control over this status, as it has to do with matters like sex, race, citizenship and other less changeable characteristics. An ascribed status of low social ranking can make it difficult for an individual to obtain more desirable achieved statuses.

For example, Jews, Latinos and women have never occupied the status of President of the United States. This has been true for centuries even though members of these groups are (officially) considered citizens in good standing. Ascribed status in India is an even more overpowering influence keeping individual citizens in the same occupational *caste* as their parents. It's unchangeable, as during slavery in the USA.

Achieved Status – is the status which is *earned* through the individual's actions. Examples of achieved status could include: student, instructor, parent, photographer, etc. There is a lot of cultural guidance and pressure that leads us into these “choices,” but at least there is *some* measure of control by the individual.

Status Inconsistency - We are all involved in several social arrangements at once. A student might be a member of a family, a peer group, a workplace, jazz ensemble, sports team, etc. A high status in one arrangement tends to increase the chances of holding a high status in another.

But there is certainly no guarantee. A racially black college professor may enjoy high prestige on a college campus, but as a member of a minority group may be unduly targeted by undercover store security staff while shopping at the local mall. The photo below provides another example of status inconsistency, this one having to do with gender issues.

Roles

In William Shakespeare's famous play, *As You Like It*, a line in the script is found that comes surprisingly close to the sociological explanation of the interplay between a status and a “role.” Here is the line from the play:

- *All the world is a stage. And all the people are merely players. They have their exits and entrances; and each, in their time, plays many parts.*

What Shakespeare's character is saying is - whether in real life or in theatre production - all our roles as people are *learned* behaviors, and that each of us must *act out these roles* during our lifetimes. Yes, Shakespeare is claiming that we are all actors, in every social situation we enter, at all times.

Sociologists tend to agree. In a sense, you can think of your own life and behavior as if you were in several plays at once. The status is the ‘part’ we are assigned in each play, for example, “student.” **A role includes the behaviors, obligations and privileges attached to that status/part.** All this is expected from someone with a particular status or part in the play. So...a student *must* come to class, since it is an obligation of the student role, and a student *may* apply for low interest loans and outright grants to get through college. Loans and grants are *privileges* of the “student” role.

Of course, if you don't have the status/part, you cannot play the role; it would not be believable. So...no status, no role. And for that matter, if you do have a status, but refuse to play the role associated, you may lose the status. Members of the fire

department who will not attend the community fire emergencies will be soon looking for other work. The concepts of *status-and-role* work together, always.

We don't like to think of our own personal behavior as if we were just "players" or that we learn our behavior almost totally from others, because it makes us, as individuals, seem shallow or phony. We are neither. Really, we have little choice in the matter but to copy behavior, for these roles are tried and true ways of getting through life. A truly new and unique behavior that exists outside of any established role might not be understood, and therefore would likely be an inefficient way to interact.

But not all of our creativity is stifled by cultural role expectations. The unique qualities of an individual have an opportunity to emerge most often in *how the role is played*. We are allowed to put a certain amount of spin on any role we play. And by doing so, we can gradually expand the possibilities and freedoms for others that follow.

[As noted on p.21, here's my satirical response to the notion of tourism or escape to Mars, published as an Op-Ed in a Sunday edition of the Minneapolis Star Tribune, 2023]



NASA Public Domain Photo

The Billionaire Boyz Want You on Mars *by Gary Payne*

Are you coming with us?

There's a deserted beach waiting for you on Mars and it's as far from the madding crowds as you'll ever need to be. Can you spot any whales in this photo from the Mars Rover? Sadly, it looks like the tide was out. Let's check again later. [continued]

Mars earns NASA's highest rating for "human habitability" among the planets in our solar system which has led some entrepreneurs to ponder its unrealized potential.

Behold the Billionaire Boyz: Bezos, Branson and Musk. They suggest that they can colonize Mars and turn it into a tourist attraction. And they are putting their money - which used to be *our* money - where their mouths are.

Hey, I'm all in! Doubts be damned! I grew up reading Space World Magazine. My parents' investment in this material indicated that they either loved me or preferred that I live on a distant planet. Either way, I'm ready to fulfill the dream. And I'm not alone in my enthusiasm. To a public and press sick of politics, this other-worldly bravado is a badly needed tonic.

Branson told Forbes Magazine that he wants his space tourists to be, "fun people." I do hope we are a whole of fun since we'll be tightly jammed together for the five to ten month trip of 140 million miles. One way. We'll be extremely close friends by the time we get there and possibly a merged organism by the time we get back.

But *we will get back* because rocket technology today is so advanced that breakdowns are almost unheard of. Musk's two rocket ship explosions in 2025 were just aberrations. And, as he says, "We learned a lot!"

Less helpful in damning the doubts is that the average temperature on Mars is -67F. dropping at times to -195F. So OK, we'll need to pack a sweater and mittens. But don't worry about rain spoiling our vacation. It hasn't rained on Mars since...well, it has been...a long, long while.

But what a joy it will be to leapfrog around on this planet! Mars' has only 38% of Earth's gravity which makes for ridiculously easy hiking. The same absence of gravity also lifts gorgeous clouds of iron-laden dust and grit as it thrashes by in 50 mph winds; it's truly a sight for sore eyes. Even better, that iron haze might shield us a bit from the sterilizing effect of harsh ultraviolet radiation from the sun. Unlike Earth, Mars has no ozone layer hovering above it to protect living things.

So, I guess we'll need an umbrella after all. A big one. Possibly metal.

Nevertheless, the near total lack of an atmosphere on Mars should make for some breathtaking tourist entertainment during meteor showers. Do you remember playing "Dodge Ball" when you were just a kid? It will be like that except for no warning when the game starts or stops. On Earth, meteors usually burn up in contact with our atmosphere before we have the pleasure of seeing them up close and personal. That explains Earth's chronic shortage of giant craters too.

Oxygen on Mars is 100 times less prevalent than on Earth, so we'll have to train at high altitudes before we start the fun trip. Way, way high. Unless tourists on Mars are in abnormally superb physical condition our hikes may be limited to about one city block or however long a tourist can hold a breath. To make up for this I suggest creating hundreds of very tiny trails to choose from.

Oh, I know what you're thinking. Yes, we *could* bounce around Mars in space suits, strapped to oxygen containers and clamped to excretion bags. But that makes it harder for tourists to surf the waves, have a picnic, get a nice tan, listen to the calls of the wildlife or make love in a private crater. So, eventually we'll probably want a real atmosphere on Mars despite the drawbacks.

The Boyz speak of introducing oxygen-belching microbes on Mars to create an atmosphere that supports humans. Evidently the harsh radiation, frigid temperatures and frequent sand blasting winds don't bother microbes. So I say let's haul in several tons of microbes to make the dream of life on Mars come true. We can scatter them around our discarded protein squeeze tubes and assorted space junk at the new Mars Big Deep Crater Landfill.

Just like all other wildlife we've discovered on Mars (none yet, but the Rover is still looking!) microbes are fascinating life forms even if they don't have 1/10th the biological grandeur of a flea. Until microbial evolution creates an entire Martian ecosystem remember to pack a microscope for wildlife viewing. That could take a while, just like it did on Earth. Be patient.

Some spectacularly foresighted deep thinkers claim that we'll soon need to find a replacement planet for humanity's future. The Boyz' upbeat claims have certainly fertilized that concept. We can't let the Chinese take the lead on this galactic jewel. They have already landed their own space litter on Mars and are undoubtedly designing Sino Estates Ultra-Rise Communities for their enormous population. We need to get our sleek and more appropriate Dusty Ridge Condos & Time Shares in place in the most scenic areas ASAP. America First!

Yet it would be cruel to leave the rest of Earth's population behind on our disposable planet. So, after we establish Mars as our colony, we can begin the evacuation. I've crunched the numbers on this and it's entirely doable. But we'll have to pack the new immigrants into the rocket ships with even more enthusiasm and thoughtful planning than on the giant slave ships of the late 1700s. Using similar passenger numbers...say, 500 heavily anesthetized and shrink-wrapped individuals per rocket launch, it would only take 2 million rocket launches to get *one* billion people to safe refuge on Mars.

I just don't see a problem here.

The lucky first billion people to leave our dying planet would cover the populations of the USA, England and *some* of the friendlier nations of Europe and...*maybe* Canada. Of course that would leave 7 billion people behind. Let's look into that matter later. First things first.

Although Mars is the most "habitable" planet in our solar system, it isn't the Boyz' only option. Beautiful Venus places a close second in habitability. It's orbit is closer to the sun than Earth or Mars. Stargazers go breathless over its unique glow in the night sky. Likewise, sun worshiping tourists will fall hopelessly in love with Venus. And they'll be able to get a very deep dark tan in 30 seconds even while slathered with Coppertone's new sunblock 40,000 with genuine lead and asbestos additives for shielding. This tan won't wear off like it does on Earth. At Venus' average temperature of 847 degrees F., a top notch air conditioner would be a nice touch for the warmer summer days. Check Consumer Reports for ratings before the rush begins.

And finally, peering midway down your solar system, there is Uranus. Oh, Boyz. My advice for each of the Boyz is this: try to forget about Uranus even though you may be curious about it, though you may be drawn to it, or you somehow identify with it, or it with you. But really now...if Uranus averages -353 degrees F. (it does) then I say Uranus is just too damned cold.

Otherwise, I encourage the Boyz to let their imaginations wander freely. Don't overthink it. It has always been the entrepreneurs that ignored the nay-sayers and took the human story to new heights and unmistakably obscene profits.

Meanwhile, the rest of us billionaire-admirers should be on the lookout for attempts to block or belittle the Boyz' dream of galactic tourist havens. Their critics will likely make an all too predictable argument:

A more plausible alternative to actually colonizing biologically uber-hostile planets might be to spend your immense fortunes protecting your ancestral home. Earth may be the only blue planet you'll ever have to neglect, to ruin...or to save.

Of course, people that think like that will never make a billion bucks.

REFERENCES for Chapter 3

1. For a useful summary supporting this statement, read the November 2004 issue of National Geographic, pp. 2-20.
2. "Genetics," Microsoft® Encarta® Online Encyclopedia 2004
3. Zinn, Howard. *A People's History of the United States*.
4. Weatherford, Jack. *Indian Givers*. Fawcett Columbine Books, 1988.
5. *"Off-target: When missile strikes at alleged terrorists go awry, U.S. policy takes a hit"*. [Los Angeles Times](#). 28 March 2008.
6. For the latest information on these matters, visit the websites of the National Labor Committee (www.nlcnet.org) or Human Rights Watch (www.hrw.org).