

FIGHTING FOR AMERICA'S SOUL

John Scales Avery

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Introduction

Democratic institutions are in danger

This book consists mainly of chapters and articles that I have previously published, although some new material has been added. The book deals with the the current deep split in public opinion in the United States. Democratic institutions are in danger from racism and neo-fascism. Progressives are fighting to save the values and institutions on which their country was founded. They are fighting to save America's soul.

Racism, discrimination and xenophobia

Progressives today would like to eliminate all forms of discrimination, whether based on race, religion, ethnicity, or gender. They are opposed by white nationalist groups, especially in rural areas and among white industrial workers and evangelicals, who fear that their own groups will soon be outnumbered by those who differ from them in ethnicity, race or religion. Donald Trump has appealed to these fears using rhetoric similar to that of Hitler. According to the testimony of his first wife, he kept a book Hitler's speeches beside his bedside and studied it diligently. Hitler's rise to power in Germany probably would not have occurred had it not been for the terrible economic stress produced by the terms of the Versailles Treaty. Working-class white Americans are similarly stressed, and they have chosen a similar leader.

Excessive economic inequality

The United States today is characterized by excessive economic inequality. As Senator Bernie Sanders said, "There is no justice, and I want you to hear this clearly, when the top one-tenth of 1 percent - not 1 percent, the top one-tenth of 1 percent - today in America owns almost as much wealth as the bottom 90 percent."

Such exaggerated inequality is bad in itself, but it also leads to governmental corruption. Since Citizens United, corporations have been able to make enormous donations to the campaigns of politicians, essentially buying their support. Studies have shown that at present, the wishes of voters matter little in comparison to the wishes of the corporate sponsors of politicians. Because of this, the United States is not a democracy but an oligarchy.

Progressives are fighting to change this. They are fighting to save “government of the people, by the people and for the people”. They are fighting for America’s soul.

The military-industrial complex

In his famous farewell address, Dwight D. Eisenhower warned about the power of the military-industrial complex. He said “In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the Military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.”

In another speech, Eisenhower said, “Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed. This world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children.”

Today the United States has bases in almost every country of the world, and spends almost a trillion dollars every year on armaments, or more than a trillion, depending on what is included. Aggressive foreign wars, and regime change coups have produced untold suffering, as well as a refugee crisis. Progressives are fighting to change this. They are fighting for a more peaceful America. They are fighting for America’s soul.

Secrecy and democracy are incomparable

John Adams wrote: “The jaws of power are always open to devour, and her arm is always stretched out, if possible, to destroy the freedom of thinking, speaking, and writing.”

According to the Nuremberg Principles, the citizens of a country have a responsibility for the crimes that their governments commit. But to prevent these crimes, the people need to have some knowledge of what is going on. Indeed, democracy cannot function at all without this knowledge.

What are we to think when governments make every effort to keep their actions secret from their own citizens? We can only conclude that although they may call themselves democracies, such governments are in fact oligarchies or dictatorships.

We do not know what will happen to Julian Assange. If he dies in the hands of his captors he will not be history’s first martyr to the truth. The

ageing Galileo was threatened with torture and forced to recant his heresy, that the Earth moves around the Sun. Galileo spent the remainder of his days in house arrest.

Giordano Bruno was less lucky. He was burned at the stake for maintaining that the universe is larger than it was then believed to be. If Julian Assange becomes a martyr to the truth like Galileo or Bruno, his name will be honored in the future, and the shame of his captors will be remembered too.

Edward Snowden's revelations showed us the extent of government spying, and the extent of the deep state. Progressives are fighting to make the American government more truthful and open. They are fighting for America's soul.

Contents

1	THE DISCOVERY OF AMERICA	9
1.1	America has been discovered many times	9
1.2	Agriculture in the western hemisphere	10
1.3	Crimes against indigenous peoples	15
1.4	Luther Standing Bear	17
2	ALL MEN ARE CREATED EQUAL	21
2.1	What is law?	21
2.2	The English Bill of Rights, 1689	24
2.3	The Declaration of Independence, July, 4, 1776	24
2.4	The United States Constitution and Bill of Rights, 1789	25
2.5	Slavery in America	28
2.6	The Klu Klux Klan	31
2.7	Martin Luther King, Jr.	35
3	THE MILITARY-INDUSTRIAL COMPLEX	41
3.1	The arms race prior to World War 1	41
3.2	Krupp, Thyssen and Germany's steel industry	43
3.3	Colonialism and the outbreak of the First World War	43
3.4	Prescott Bush and Hitler	44
3.5	Fritz Thyssen supports Hitler's rise to power	46
3.6	Eisenhower's farewell address	52
3.7	The nuclear arms race	54
3.8	Global famine produced by nuclear war	60
3.9	Dangers of nuclear power generation	62
3.10	Military-industrial complexes today	67
3.11	A culture of violence	75
4	DEMOCRACY OR OLIGARCHY?	95
4.1	Benefits of equality	95
4.2	Extreme inequality today	98
4.3	Restoring Democracy in the United States	98
4.4	Europe needs to be independent	99

4.5	Secrecy and democracy are incompatible	103
4.6	Democracy and freedom of information	106
4.7	Racism, colonialism and exceptionalism	107
4.8	The agony of Iraq	108
4.9	Attacks on Iran, past and present	113
4.10	Some contributions of Islamic culture	116
4.11	Politeness in multi-ethnic societies	119
4.12	The 2016 US presidential election	119
5	THE DEEP STATE	133
5.1	Edward Snowden's revelations	133
5.2	The jaws of power	134
5.3	The deep state	135
5.4	<i>The United States of Secrets</i>	142
5.5	Censorship of the news	143
5.6	Coups, torture and illegal killing	143
5.7	Secret trade deals	144
5.8	Secrecy, democracy and nuclear weapons	145
5.9	Freedom from fear	146
5.10	<i>Inside Job</i>	147
5.11	<i>Confessions of an economic hit-man</i>	150
6	THE MOST DANGEROUS ORGANIZATION IN HISTORY	153
6.1	Donald Trump's climate change denial	153
6.2	Jair Bolsonaro, the Trump of the Tropics	155
6.3	The Evangelicals believe that there is no need to act	158
6.4	Banks give fossil fuel giants \$1.9 trillion since Paris	159
6.5	Fossil fuel industry's disinformation campaign	166
6.6	The UK declares a climate emergency	170
6.7	The 2018 IPCC report	171
6.8	Greta Thunberg	173
6.9	Worldwide school strike, 15 March, 2019	176
6.10	Forms of renewable energy	177
6.11	Renewables are now much cheaper than fossil fuels!	201
6.12	Lester R. Brown	203
6.13	Reforming our food and agricultural systems	205
6.14	Alexandria Ocasio-Cortez and the Green New Deal	215
6.15	Media in the service of powerholders	220
6.16	Television as a part of our educational system	220
6.17	Neglect of climate change in the mass media	222
6.18	Climate change denial in mass media	223
6.19	Showing unsustainable lifestyles in mass media	226
6.20	Alternative media	226

6.21	Outstanding voices calling for climate action	227
7	MAJOR CRIMES OF DONALD TRUMP	233
7.1	Children in cages	233
7.2	Threats of war	234
7.3	Alt-right	235
7.4	Proud Boys	241
7.5	Evangelicals	243
7.6	The El Paso mass murders	249
7.7	Right-wing parties in Europe and elsewhere.	249
7.8	Trump copies Hitler's rhetoric	251
8	ONLY PROGRESSIVES CAN SAVE AMERICA	261
8.1	Progressives from the 1960's can inspire us today	261
8.2	Woodstock	261
8.3	Joan Baez	265
8.4	Bob Dylan	269
8.5	Pete Seeger	273
8.6	Protests against the Vietnam War	280
8.7	Progressive Democrats versus the DNC and Nancy Pelosi	290
8.8	Elizabeth Warren	291
8.9	Bernie Sanders	294
8.10	Looking toward the future	299

Chapter 1

THE DISCOVERY OF AMERICA

1.1 America has been discovered many times

The continents of North America and South America have been discovered many times by humans. Figure 1.1 shows the path of the first migrations across the Bering Strait during a glacial period. These migrations are thought to have started approximately 20,000 years ago. The interiors of present-day Alaska and Canada were at that time entirely covered by a thick ice sheet, but archaeological evidence shows that these first Americans had boats and moved along the coast, living from fishing and from gathering shellfish.

It is possible that humans also later reached Central and South America by boat, both from the Pacific side and from the Atlantic side, as postulated by Thor Heyerdahl.

During the Viking era, Norsemen colonized both Iceland and Greenland. Their ships were capable of long ocean voyages, but they lacked magnetic compasses for navigation. Their practice was to sail along an east-west line, maintaining their constant longitude by observing the sun and stars. On one such voyage, a ship aiming for the Greenland colony was blown off course by a storm, and continued sailing westward, finally reached land on the coast of Labrador. After this discovery, Leif Erikson urged his father, Erik the Red, to lead an expedition to explore the new land. On the way to the boats, Erik the Red was thrown from his horse and injured his leg. He took this as a bad omen, and said “I am not destined to discover more lands than I already have.” Thus Leif Erikson and his men sailed westward alone, reached Labrador. They then sailed south along the coast.

The problem that prevented the Scandinavians from settling permanently in North America was that they failed to make peace with the people who were already there. *Vinlandia Saga* recounts an incident in which Leif Erikson’s men encounter three American Indians and fight with them, killing two. The third, however, escaped. That night, according to the saga, Leif Erikson was visited in a dream by his father, Erik the Red. The father said in a loud voice, “Wake up, Leif Erikson! Wake up and take your sword in your hand! Wake up, and wake your men! Wake up if you want to live!” Leif Erikson followed this advice, just in time to be ready when a large band of First Peoples attacked. Although the Norse colonization of North America was not permanent, it lasted for many generations.

The Greenland Norsemen called Labrador “Markland”, and there was even a Bishop of Markland. What the Norsemen called “Vinland” seems to have been Newfoundland. Remains of Norse buildings were found at L’Anseaux aux Meadows near the northern tip of Newfoundland in 1960.

The famous voyage of Columbus has been celebrated for a long time in the United States on Columbus Day. However, now, as the greed and crimes of Columbus have become more widely known, there is a movement to abolish Columbus Day and to replace it by Indigenous People’s Day.

1.2 Agriculture in the western hemisphere

During a glacial period between 20,000 and 10,000 years before the present, there was a land bridge across the Bering Strait. There is evidence that humans crossed this land bridge from Siberia and followed a coastal route past the glaciated regions of what is now Canada, finally reaching South America. Humans were able to build boats at that time, as evidenced by traces of very early settlements on islands off the coast of South America.

In a May 24, 2017 article in *Science*, Lizzie Wade wrote:

“About 600 kilometers north of Lima, an imposing earthen mound looms over the sea. People began building the ceremonial structure, called Huaca Prieta, about 7800 years ago. But according to a new study, the true surprise lies buried deep beneath the 30-meter-tall mound: stone tools, animal bones, and plant remains left behind by some of the earliest known Americans nearly 15,000 years ago. That makes Huaca Prieta one of the oldest archaeological sites in the Americas and suggests that the region’s first migrants may have moved surprisingly slowly down the coast.

“The evidence of early human occupation stunned Tom Dillehay, an archaeologist at Vanderbilt University in Nashville who led the new study. Initially, he was interested in examining the mound itself. But geologists on his team wanted to study the landform under the mound, so ‘we just kept going down,’ he says. The deepest pit, which took 5 years to excavate, reached down 31 meters. Shockingly, those deep layers contained telltale signs of human occupation, Dillehay’s team reports today in *Science Advances*: evidence of hearth fires, animal bones, plant remains, and simple but unmistakable stone tools. Radiocarbon dates from charcoal place the earliest human occupation at nearly 15,000 years ago.

“That’s made some researchers say Huaca Prieta should join the small but growing list of pre-14,000-year-old sites that have revolutionized scientists’ vision of the earliest Americans. Archaeologists used to think that people walked from Siberia through an ice-free passage down Alaska and Canada, reaching the interior of the United States about 13,000 years ago. In recent years, however, well documented earlier sites like Chile’s Monte Verde have convinced most archaeologists that humans made it deep into the Americas by 14,500 years ago, meaning that they would have had to cross Canada long before an ice-free corridor existed. That would have left them with one logical route into the Americas:

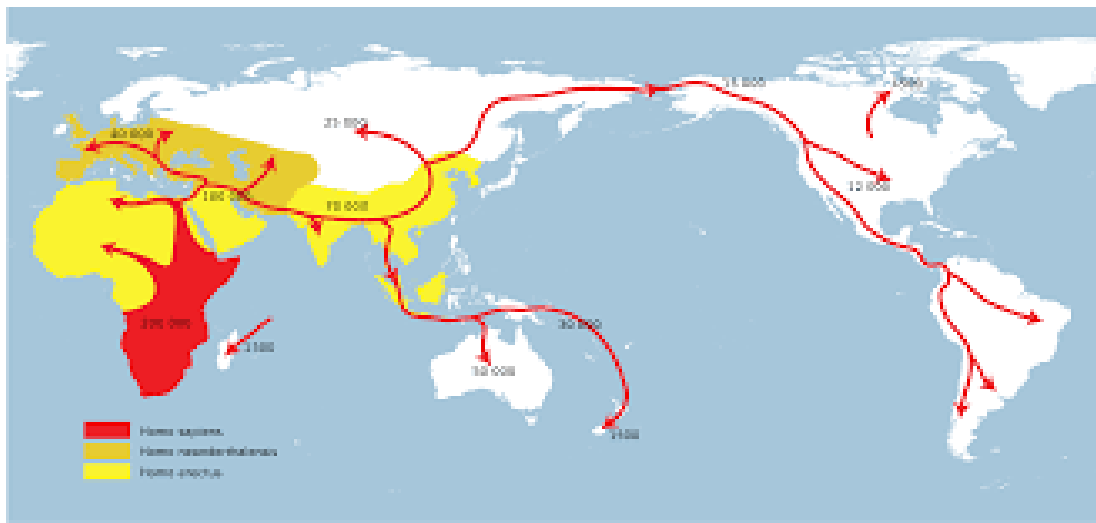


Figure 1.1: Modern humans crossed the Bering Straits during a glacial period between 20,000 and 10,000 years before the present.

down the Pacific coast. But direct evidence for such a migration is lacking.”

Another site that shows evidence of early human presence is Piki Mach’ay cave in Peru. Radiocarbon dates from this cave give a human presence ranging from 22,200 to 14,700 years ago, but this evidence has been disputed. Wikipedia states that “Piki Mach’ay yielded some of the oldest plant remains in Peru, including an 11,000 year old bottle gourd. Strata from later periods at the site revealed fishtail points, manos, and metates. Plant remains indicate that, before 3,000 years BCE, amaranth, cotton, gourds, lucuma, quinoa, and squash were cultivated in the Ayacucho Basin before 3,000 years BCE. By 4,000 years BCE corn (*Zea mays*) and common beans were grown. Chili remains date from 5,500 to 4,300 years BCE. The large amounts of guinea pig bones suggest possible domestication, and llamas may have been domesticated by 4,300 to 2,800 years BCE.”

Peru gives potatoes to the world

Wikipedia states that “Cultivation of potatoes in South America may go back 10,000 years, yet the tubers do not preserve well in archaeological record, and there are problems with exact identification of those that are found... In the Altiplano, potatoes provided the principal energy source for the Inca Empire, its predecessors, and its Spanish successor... Potato was the staple food of most Pre-Columbian Mapuches¹, ‘specially in the southern and coastal [Mapuche] territories where maize did not reach maturity”

¹The Mapuche are a group of indigenous inhabitants of south-central Chile and southwestern Argentina, including parts of present-day Patagonia.



Figure 1.2: The “three sisters”, maize, squash and beans, traditionally grown by tribes of the first people in North America.

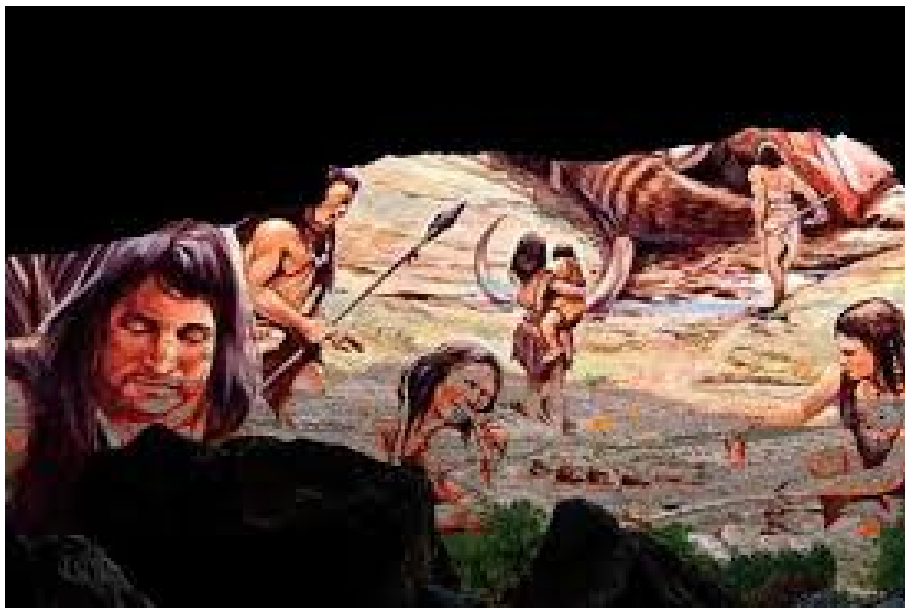


Figure 1.3: An artist's guess at what the inhabitants of Piki Mach'ay cave in Peru might have looked like.



Figure 1.4: In the mountainous regions of Peru, the ancient Incas built terraces for the cultivation of potatoes.



Figure 1.5: Sir Walter Raleigh presented potatoes to Queen Elizabeth I.



Figure 1.6: The Irish potato famine.



Figure 1.7: Vincent Van Gogh's painting, "The Potato Eaters".

1.3 Crimes against indigenous peoples

Our older brothers can help us today

The distinguished English author Anne Baring describes the indigenous peoples of the world as our “older brothers”. They are anxious to give their “younger brothers” (us) advice about how to preserve the earth, rather than destroying it. But we do not listen. Instead, we murder them because of greed, because we want to take their land.

Genocides in the Americas

Instances of genocide stain much of human history. Readers of Charles Darwin’s book describing “The Voyage of the Beagle” will remember his horrifying account of General Rosas’ genocidal war against the Amerind population of Argentina. Similar genocidal violence has been experienced by indigenous peoples throughout South and Central America, and indeed throughout the world.

In general, the cultures of indigenous peoples require much land, and greed for this land is the motive for violence against them. However, the genetic and cultural heritage of indigenous peoples can potentially be of enormous value to humanity, and great efforts should be made to protect them.

In North America, we can recall that military commanders, such as Lord Jeffrey Amherst, deliberately inoculated the Indians with smallpox by giving them blankets from smallpox hospitals. Amherst wrote to his associate, Colonel Henry Bouquet “You will do well to try to inoculate the Indians, by means of blankets, as well as to try every other method that can serve to extirpate this execrable race.” This is clearly an instance of genocide, as well as being an example of the use of biological weapons.

The website of the Holocaust Museum Houston states that “Civil war existed in Guatemala since the early 1960s due to inequalities existing in the economic and political life. In the 1970s, the Maya began participating in protests against the repressive government, demanding greater equality and inclusion of the Mayan language and culture. In 1980, the Guatemalan army instituted “Operation Sophia,” which aimed at ending insurgent guerilla warfare by destroying the civilian base in which they hid. This program specifically targeted the Mayan population, who were believed to be supporting the guerilla movement. Over the next three years, the army destroyed 626 villages, killed or ‘disappeared’ more than 200,000 people and displaced an additional 1.5 million, while more than 150,000 were driven to seek refuge in Mexico. Forced disappearance policies included secretly arresting or abducting people, who were often killed and buried in unmarked graves.”

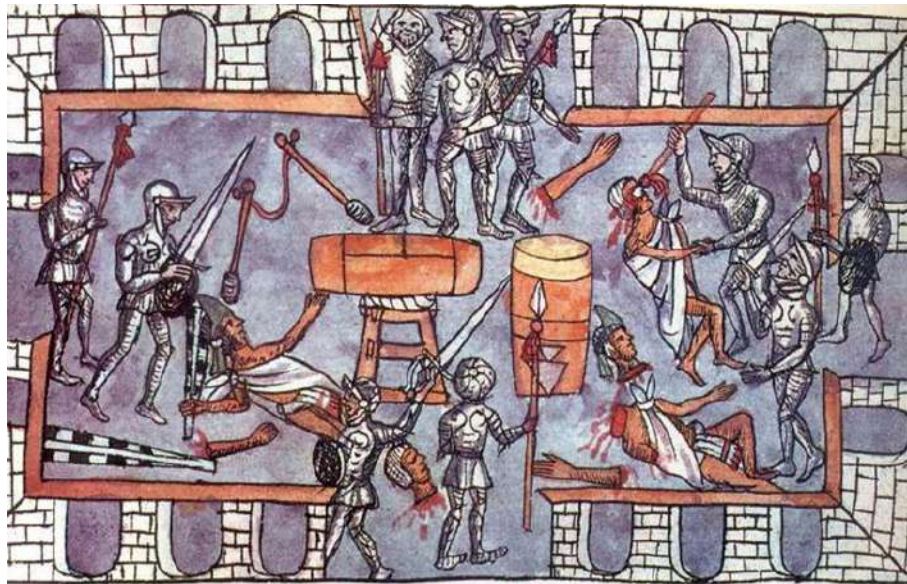


Figure 1.8: The atrocities committed by the “conquistadors” over the course of three centuries are far too many to be listed here, but there are some that stand out. In the Caribbean, most of the native populations were completely wiped out due to Spanish rapine and diseases. In Mexico, Hernan Cortes and Pedro de Alvarado ordered the Cholula Massacre and the Temple Massacre respectively, killing thousands of unarmed men, women and children. In Peru, Francisco Pizarro captured Emperor Atahualpa in the midst of an unprovoked bloodbath at Cajamarca. Wherever the conquistadors went, death and misery for the natives followed.

1.4 Luther Standing Bear

Luther Standing Bear (1868-1939) was a native American Lakota chief. He spanned both his native traditions and the white culture, having received an education at the Carlisle Industrial School. He became the author of many books, for example *My People*, *The Sioux*, *My Indian Boyhood*, and *Land of the Spotted Eagle*.

Some quotations from Luther Standing Bear

The old Lakota was wise. He knew that man's heart away from nature becomes hard; he knew that lack of respect for growing, living things soon led to lack of respect for humans, too.

Out of the Indian approach to life there came a great freedom, an intense and absorbing respect for life, enriching faith in a Supreme Power, and principles of truth, honesty, generosity, equity and brotherhood as a guide to mundane relations.

As a child I understood how to give, I have forgotten this grace since I have become civilized.

There is a road in the hearts of all of us, hidden and seldom traveled, which leads to an unknown, secret place. The old people came literally to love the soil, and they sat or reclined on the ground with a feeling of being close to a mothering power. Their teepees were built upon the earth and their altars were made of earth. The soul was soothing, strengthening, cleansing, and healing. That is why the old Indian still sits upon the earth instead of propping himself up and away from its life giving forces. For him, to sit or lie upon the ground is to be able to think more deeply and to feel more keenly. He can see more clearly into the mysteries of life and come closer in kinship to other lives about him.

Hollow Horn Bear knew that to be leader and adviser of his people he must be honest and reliable, and that his word once given in promise must never be taken back. He knew that he must be a man of will-power, standing for the right no matter what happened to him personally; that he must have strength of purpose, allowing no influence to turn him from doing what was best for the tribe. He must be willing to serve his people without thought of pay. He must be utterly unselfish and kind-hearted to the old and poor and stand ready to give to those in need. Above all, he must be unafraid to deal equal justice to all.

Generosity is a mark of bravery, so all Sioux boys were taught to be generous.



Figure 1.9: Chief Luther Standing Bear (1868-1939), author and philosopher. In one of his books, he wrote: “I find [a] great distinction between the faith of the Indian and the white man. Indian faith sought the harmony of man with his surroundings, the other sought the dominance of surroundings.”

The Lakota was wise. He knew that man's heart, away from nature, becomes hard; he knew that a lack of respect for growing, living things soon led to a lack of respect for humans, too.

Wherever forests have not been mowed down, wherever the animal is recessed in their quiet protection, wherever the earth is not bereft of four-footed life - that to the white man is an 'unbroken wilderness.' But for us there was no wilderness, nature was not dangerous but hospitable, not forbidding but friendly. Our faith sought the harmony of man with his surroundings; the other sought the dominance of surroundings. For us, the world was full of beauty; for the other, it was a place to be endured until he went to another world. But we were wise. We knew that man's heart, away from nature, becomes hard.

Kinship with all creatures of the earth, sky, and water was a real and active principle. In the animal and bird world there existed a brotherly feeling that kept us safe among them... The animals had rights - the right of man's protection, the right to live, the right to multiply, the right to freedom, and the right to man's indebtedness. This concept of life and its relations filled us with the joy and mystery of living; it gave us reverence for all life; it made a place for all things in the scheme of existence with equal importance to all.

And here I find the great distinction between the faith of the Indian and the white man. Indian faith sought the harmony of man with his surroundings, the other sought the dominance of surroundings.

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Chapter 2

ALL MEN ARE CREATED EQUAL

2.1 What is law?

After the invention of agriculture, roughly 10,000 years ago, humans began to live in progressively larger groups, which were sometimes multi-ethnic. In order to make towns, cities and finally nations function without excessive injustice and violence, both ethical and legal systems were needed. Today, in an era of global economic interdependence, instantaneous worldwide communication and all-destroying thermonuclear weapons, we urgently need new global ethical principles and a just and enforceable system of international laws.

The principles of law, ethics, politeness and kindness function in slightly different ways, but all of these behavioral rules help human societies to function in a cohesive and trouble-free way. Law is the most coarse. The mesh is made finer by ethics, while the rules of politeness and kindness fill in the remaining gaps.

Legal systems began at a time at a time when tribal life was being replaced by life in villages, towns and cities. One of the oldest legal documents that we know of is a code of laws enacted by the Babylonian king Hammurabi in about 1754 BC. It consists of 282 laws, with scaled punishments, governing household behavior, marriage, divorce, paternity, inheritance, payments for services, and so on. An ancient 2.24 meter stele inscribed with Hammurabi's Code can be seen in the Louvre. The laws are written in the Akkadian language, using cuneiform script.

Humanity's great ethical systems also began during a period when the social unit was growing very quickly. It is an interesting fact that many of history's greatest ethical teachers lived at a time when the human societies were rapidly increasing in size. One can think, for example of Moses, Confucius, Lao-Tzu, Gautama Buddha, the Greek philosophers, and Jesus. Muhammad came slightly later, but he lived and taught at a time when tribal life was being replaced by city life in the Arab world. During the period when these great teachers lived, ethical systems had become necessary to over-write raw inherited human emotional behavior patterns in such a way that increasingly large societies could function in a harmonious and cooperative way, with a minimum of conflicts.



Figure 2.1: A portion of Hammurabi's Code, c. 1754 BC



Figure 2.2: King John is forced to sign the Magna Carta

Magna Carta, 1215

2015 marks the 800th anniversary of the Magna Carta, which is considered to be the foundation of much of our modern legal system. It was drafted by the Archbishop of Canterbury to make peace between the unpopular Norman King John of England and a group of rebel barons. The document promised the protection of church rights, protection for the barons from illegal imprisonment, access to swift justice, and limitations feudal payments to the Crown. It was renewed by successive English sovereigns, and its protection against illegal imprisonment and provisions for swift justice were extended from the barons to ordinary citizens. It is considered to be the basis for British constitutional law, and in 1789, it influenced the drafting of the Constitution of the United States. Lord Denning described the Magna Carta as "the greatest constitutional document of all times: the foundation of the freedom of the individual against the arbitrary authority of the despot".



Figure 2.3: Lord Denning described the Magna Carta as "the greatest constitutional document of all times: the foundation of the freedom of the individual against the arbitrary authority of the despot".

2.2 The English Bill of Rights, 1689

When James II was overthrown by the Glorious Revolution the Dutch stadholder William III of Orange-Nassau and his wife, Mary II of England were invited to be joint sovereigns of England. The Bill of Rights was originally part of the invitation, informing the couple regarding the limitations that would be imposed on their powers. Later the same year, it was incorporated into English law. The Bill of Rights guaranteed the supremacy of Parliament over the monarch. It forbid cruel and unusual punishments, excessive bail and excessive fines. Freedom of speech and free elections were also guaranteed, and a standing army in peacetime was forbidden without the explicit consent of Parliament. The Bill of Rights was influenced by the writings of the Liberal philosopher, John Locke (1632-1704).

2.3 The Declaration of Independence, July, 4, 1776

The Declaration of Independence contains the following words, which we must remember today:

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. - That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, - That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it,

and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

Racists and white supremacists in the United States have forgotten that their country we founded on the basic principle of the equality of all human beings.

2.4 The United States Constitution and Bill of Rights, 1789

The history of the Federal Constitution of the United States is an interesting one. It was preceded by the Articles of Confederation, which were written by the Second Continental Congress between 1776 and 1777, but it soon became clear that Confederation was too weak a form of union for a collection of states.

George Mason, one of the drafters of the Federal Constitution, believed that “such a government was necessary as could directly operate on individuals, and would punish those only whose guilt required it”, while another drafter, James Madison, wrote that the more he reflected on the use of force, the more he doubted “the practicality, the justice and the efficacy of it when applied to people collectively, and not individually.”

Finally, Alexander Hamilton, in his Federalist Papers, discussed the Articles of Confederation with the following words: “To coerce the states is one of the maddest projects that was ever devised... Can any reasonable man be well disposed towards a government which makes war and carnage the only means of supporting itself, a government that can exist only by the sword? Every such war must involve the innocent with the guilty. The single consideration should be enough to dispose every peaceable citizen against such government... What is the cure for this great evil? Nothing, but to enable the... laws to operate on individuals, in the same manner as those of states do.”

In other words, the essential difference between a confederation and a federation, both of them unions of states, is that a federation has the power to make and to enforce laws that act on individuals, rather than attempting to coerce states (in Hamilton’s words, “one of the maddest projects that was ever devised.”) The fact that a confederation of states was found to be far too weak a form of union is especially interesting because our present United Nations is a confederation. We are at present attempting to coerce states with sanctions that are “applied to people collectively and not individually.” The International Criminal Court, which we will discuss below, is a development of enormous importance, because it acts on individuals, rather than attempting to coerce states.

There are many historical examples of successful federations; but in general, unions of states based on the principle of confederation have proved to be too weak. Probably our best hope for the future lies in gradually reforming and strengthening the United Nations, until it becomes a federation.

In the case of the Federal Constitution of the United States, there were Anti-Federalists

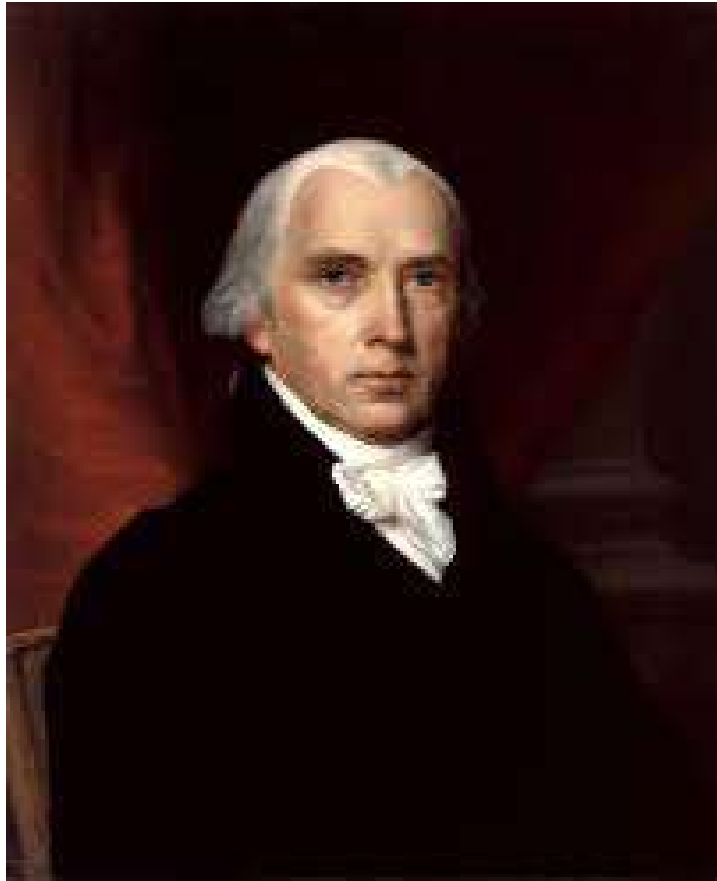


Figure 2.4: **James Madison, wrote that the more he reflected on the use of force, the more he doubted “the practicality, the justice and the efficacy of it when applied to people collectively, and not individually.” He later introduced the Constitutional amendments that became the U.S. Bill of Rights.**

who opposed its ratification because they feared that it would be too powerful. Therefore, on June 8, 1789, James Madison introduced in the House of Representatives a series of 39 amendments to the constitution, which would limit the government’s power. Of these, only amendments 3 to 12 were adopted, and these have become known collectively as the Bill of Rights.

Of the ten amendments that constitute the original Bill of Rights, we should take particular notice of the First, Fourth and Sixth, because they have been violated repeatedly and grossly by the present government of the United States.

The First Amendment requires that “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.” The right to freedom of speech and freedom of the press has been violated by the punishment of whistleblowers. The right to assem-

ble peaceably has also been violated repeatedly and brutally by the present government's militarized police.

The Fourth Amendment states that "The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized." It is hardly necessary to elaborate on the U.S. Government's massive violations of the Fourth Amendment. Edward Snowden's testimony has revealed a huge secret industry carrying out illegal and unwarranted searches and seizures of private data, not only in the United States, but also throughout the world. This data can be used to gain power over citizens and leaders through blackmail. True democracy and dissent are thereby eliminated.

The Sixth Amendment requires that "In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defense." This constitutional amendment has also been grossly violated.

In the context of federal unions of states, the Tenth Amendment is also interesting. This amendment states that "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." We mentioned above that historically, federations have been very successful. However, if we take the European Union as an example, it has had some problems connected with the principle of subsidiarity, according to which as few powers as possible should be decided centrally, and as many issues as possible should be decided locally. The European Union was originally designed as a free trade area, and because of its history commercial considerations have trumped environmental ones. The principle of subsidiarity has not been followed, and enlightened environmental laws of member states have been declared to be illegal by the EU because they conflicted with free trade. These are difficulties from which we can learn as we contemplate the conversion of the United Nations into a federation.

The United States Bill of Rights was influenced by John Locke and by the French philosophers of the Enlightenment. The French Declaration of the Rights of Man (August, 1789) was almost simultaneous with the U.S. Bill of Rights.

We can also see the influence of Enlightenment philosophy in the wording of the U.S. Declaration of independence (1776): "We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.—That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed..." Another criticism that can be leveled against the present government of the United States is that its actions seem to have nothing whatever to do with the consent of the governed, not to mention the violations of the rights to life, liberty and the pursuit

of happiness implicit in extrajudicial killings.

2.5 Slavery in America

The authors of the Declaration of Independence wrote “We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain inalienable rights, that among these are Life, Liberty and the pursuit of Happiness.” Did they really mean **all** men? What about slaves? Many of the Founding Fathers possessed them.

The American Civil War was fought over the question of whether slavery should be extended to the western territories and whether states’ rights could overrule federal authority. Lincoln’s chief aim was to save the union. He said “If I could save the union without freeing any slaves I would do it; and if I could save it by freeing all the slaves I would do it; and if I could save it by freeing some and leaving others alone I would also do that.” Later, however, Lincoln signed the Emancipation Proclamation, freeing all of the slaves.

In his Gettysburg Address, Abraham Lincoln refers to the words of the Declaration of Independence, by saying “Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.”

Although freed by the Emancipation Proclamation and by the victory of the North in the Civil War, African Americans did not have equal rights. In the South, the Klu Klux Klan was organized to terrorize and suppress them. It was not until the Civil Rights Movement of the 1960’s that some degree of equality was established; but even today there is much discrimination, for example in police treatment of suspects.

Progressives today would like to eliminate all forms of discrimination, whether based on race, religion, ethnicity, or gender. They feel that they are fighting for the basic values on which America was built, fighting for America’s soul.

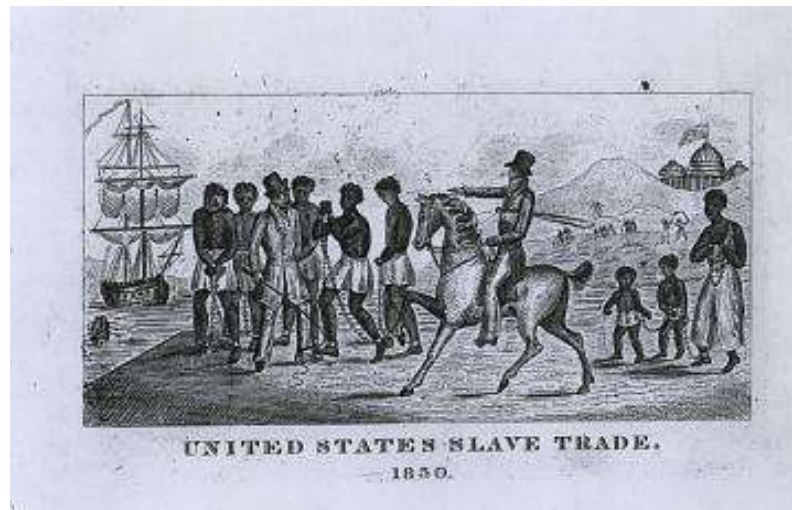


Figure 2.5: An estimated 600,000 enslaved African Americans were bought and sold in the United States in the decades before the Civil War. More than half of those sales separated parents and children.

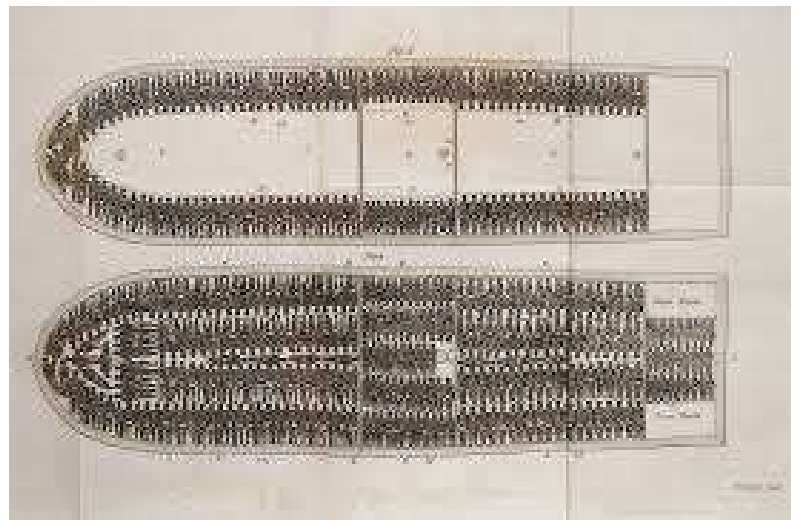


Figure 2.6: Diagram of a slave ship. A considerable proportion of the slaves being transported in this way, died during the voyage, and their bodies were thrown overboard.

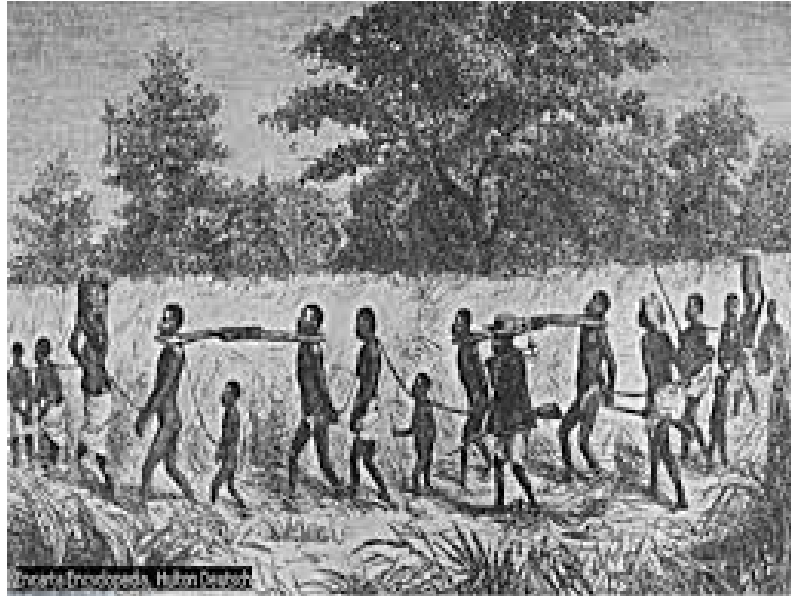


Figure 2.7: A captured Africans being marched towards slave ships.



Figure 2.8: A slave auction.

2.6 The Klu Klux Klan

Following the defeat of the Confederate states in the US Civil War, the original Klu Klux Klan was established in the south to overthrow northern rule, and to terrorize freed slaves who were thought to be a threat to white womanhood. Large numbers of black people and their sympathizers were lynched and murdered by the original KKK. The organization was outlawed in 1871.

The Klu Klux Klan was revived in 1915, inspired by D.W. Griffith's influential but controversial film *The Birth of a Nation*, which depicted the original Klan in a positive light. In this second incarnation which lasted until the mid-1920's, the KKK sought to maintain Protestant white supremacy, and opposed both Roman Catholicism and the influence of Jews.

The third incarnation of the Klu Klux Klan came in the 1950's. Local groups have opposed civil rights activists, and murdered many of them. The KKK is classified as a hate group by the Anti-Defamation League.

Wikipedia states that "The second and third incarnations of the Ku Klux Klan made frequent references to America's 'Anglo-Saxon' blood, hearkening back to 19th-century nativism. Although members of the KKK swear to uphold Christian morality, virtually every Christian denomination has officially denounced the KKK".



Figure 2.9: KKK rally in Chicago, c. 1920.



Figure 2.10: Three Ku Klux Klan members at a 1922 parade. Trump's father was a well-known Klansman in New York and New Jersey in his hey days.



Figure 2.11: Cross burning was introduced by William J. Simmons, the founder of the second Klan in 1915.



Figure 2.12: Klu Klux Klan members at a cross burning in 2005.



Figure 2.13: Sheet music to “We Are All Loyal Klansmen”, 1923.



Figure 2.14: Klu Klux Klan members march down Pennsylvania Avenue in Washington, D.C. in 1928.



Figure 2.15: Historically, the Klu Klux Klan has been responsible for innumerable lynchings.

2.7 Martin Luther King, Jr.

King applies the teachings of Thoreau and Gandhi to the Civil Rights movement

The son of a southern Baptist minister, Martin Luther King, Jr received his Ph.D. in theology from Boston University in 1955. During his studies, he had admired Thoreau's essay "On the Duty of Civil Disobedience," and he had also been greatly moved by the life and teachings of Mahatma Gandhi.

Martin Luther King Jr. had been pastor of the Dexter Avenue Baptist Church in Montgomery Alabama for only a year when he was chosen to lead a boycott protesting segregation in the Montgomery buses. Suddenly thrust into this situation of intense conflict, he remembered both the Christian principle of loving one's enemies and Gandhi's methods of non-violent protest. In his first speech as President of the Montgomery Improvement Association (a speech which the rapid pace of events had forced him to prepare in only twenty minutes, five of which he spent in prayer), he said:

"Our method will be that of persuasion, not coercion. We will only say to people, 'Let your conscience be your guide'. Our actions must be guided by the deepest principles of our Christian faith. Love must be our regulating ideal. Once again we must hear the words of Jesus echoing across the centuries: 'Love your enemies, bless them that curse you, and pray for them that despitefully use you.' If we fail to do this, our protest will end up as a meaningless drama on the stage of history, and its memory will be shrouded by the ugly

garments of shame. In spite of the mistreatment that we have confronted, we must not become bitter and end up by hating our white brothers. As Booker T. Washington said, ‘Let no man pull you down so low as to make you hate him.’”

“If you will protest courageously, and yet with dignity and Christian love, when the history books are written in future generations, the historians will have to pause and say, ‘There lived a great people, a black people, who injected new meaning and dignity into the veins of civilization.’ This is our challenge and our overwhelming responsibility.”

Victory in the court of public opinion

This speech, which Dr. King made in December 1955, set the tone of the black civil rights movement. Although the protesters against racism were often faced with brutality and violence; although many of them, including Dr. King were unjustly jailed; although the homes of the leaders were bombed; although they constantly received telephone calls threatening their lives; although many civil rights workers were severely beaten, and several of them killed, they never resorted to violence in their protests against racial discrimination. Because of this adherence to Christian ethics, public opinion shifted to the side of the civil rights movement, and the United States Supreme Court ruled bus segregation to be unconstitutional.

Welcomed to India by Nehru

In 1959, while recovering from an almost-fatal stabbing, Martin Luther King Jr. visited India at the invitation of Prime Minister Jawaharlal Nehru. Dr. King and his wife Coretta were warmly welcomed by Nehru, who changed his schedule in order to meet them. They had an opportunity to visit a religious community or “ashram” that Gandhi had founded, and they discussed non-violence with many of Gandhi’s disciples.

King is awarded the Nobel Peace Prize

In 1964, the change in public opinion produced by the non-violent black civil rights movement resulted in the passage of the civil rights act. In the same year, Dr. King was awarded the Nobel Peace Prize. He accepted it, not as an individual, but on behalf of all civil rights workers; and he immediately gave all the prize money to the movement.

Opposition to the Viet Nam War

In 1967, a year before his assassination, Dr. King forcefully condemned the Viet Nam war in an address at a massive peace rally in New York City. He felt that opposition to war followed naturally from his advocacy of non-violence. Speaking against the Viet Nam War, Dr. King said: “We have corrupted their women and children and killed their men. They move sadly and apathetically as we herd them off the land of their fathers into concentration camps where minimal social needs are rarely met. They know they must

move on or be destroyed by our bombs ... primarily women and children and the aged watch as we poison their water, as we kill a million acres of their crops. They must weep as the bulldozers roar through their areas preparing to destroy the precious trees. They wander into the hospitals. So far we may have killed a million of them, [in Vietnam by 1967] mostly children. They wander into the towns and see thousands of the children, homeless, without clothes, running in packs on the streets like animals. They see the children degraded by our soldiers as they beg for food. They see the children selling their sisters to our soldiers, soliciting for their mothers.”

Opposition to nuclear weapons

In his book, “Strength to Love”, Dr. King wrote, “Wisdom born of experience should tell us that war is obsolete. There may have been a time when war served a negative good by preventing the spread of an evil force, but the power of modern weapons eliminates even the possibility that war may serve as a negative good. If we assume that life is worth living, and that man has a right to survival, then we must find an alternative to war ... I am convinced that the Church cannot be silent while mankind faces the threat of nuclear annihilation. If the church is true to her mission, she must call for an end to the nuclear arms race.”

Assassination

On April 4, 1968, Dr. King was shot and killed. A number of people, including members of his own family, believe that he was killed because of his opposition to the Viet Nam War. This conclusion is supported by the result of a 1999 trial initiated by members of the King family. Summing up the arguments to the jury, the family’s lawyer said “We are dealing in conspiracy with agents of the City of Memphis and the governments of the State of Tennessee and the United States of America. We ask that you find that a conspiracy existed.” After two and a half hour’s deliberation, the jury found that Lloyd Jowers and “others, including governmental agencies, were parties to this conspiracy”. The verdict of the jury remains judicially valid today, and it has never been overturned in a court of law, although massive efforts have been made to discredit it.

Redemptive love

Concerning the Christian principle of loving one’s enemies, Dr. King wrote: “Why should we love our enemies? Returning hate for hate multiplies hate, adding deeper darkness to a night already devoid of stars. Darkness cannot drive out darkness; only light can do that. Hate cannot drive out hate. Only love can do that ... Love is the only force capable of transforming an enemy into a friend. We never get rid of an enemy by meeting hate with hate; we get rid of an enemy by getting rid of enmity... It is this attitude that made it possible for Lincoln to speak a kind word about the South during the Civil War, when feeling was most bitter. Asked by a shocked bystander how he could do this, Lincoln said,



Figure 2.16: Martin Luther King Jr. speaking in Washington. “I have a dream that one day this nation will rise up and live out the true meaning of its creed: ‘We hold these truths to be self-evident: that all men are created equal.’ I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave owners will be able to sit down together at the table of brotherhood... I have a dream that my four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character... This is our hope. This is the faith that I go back to the South with. With this faith we will be able to hew out of the mountain of despair a stone of hope. With this faith we will be able to transform the jangling discords of our nation into a beautiful symphony of brotherhood. With this faith we will be able to work together, to pray together, to struggle together, to go to jail together, to stand up for freedom together, knowing that we will be free one day.”

‘Madam, do I not destroy my enemies when I make them my friends?’ This is the power of redemptive love.”

To a large extent, the black civil rights movement of the '50's and '60's succeeded in ending legalized racial discrimination in America. If the methods used had been violent, the movement could easily have degenerated into a nightmare of interracial hatred; but by remembering the Christian message, “Love your enemy; do good to them that despitefully use you”, Martin Luther King Jr. raised the ethical level of the civil rights movement; and the final result was harmony and understanding between the black and white communities. Later the nonviolent methods of Gandhi and King were successfully applied to the South African struggle against Apartheid by Nelson Mandela and his followers.

Here are a few more things that Martin Luther King said

I have decided to stick to love...Hate is too great a burden to bear

Faith is taking the first step even when you can't see the whole staircase.

Our lives begin to end the day we become silent about things that matter.

In the end, we will remember not the words of our enemies, but the silence of our friends.

If you can't fly then run, if you can't run then walk, if you can't walk then crawl, but whatever you do you have to keep moving forward.

Only in the darkness can you see the stars.

There comes a time when a person must take a position that is neither safe, nor politic, nor popular, but he must take it because conscience tells him it is right.

Everybody can be great...because anybody can serve. You don't have to have a college degree to serve. You don't have to make your subject and verb agree to serve. You only need a heart full of grace. A soul generated by love.

Forgiveness is not an occasional act, it is a constant attitude.

We must accept finite disappointment, but never lose infinite hope.

There is some good in the worst of us and some evil in the best of us. When we discover this, we are less prone to hate our enemies.

We must live together as brothers or perish together as fools.

Intelligence plus character - that is the goal of true education

True peace is not merely the absence of tension; it is the presence of justice.

Science investigates; religion interprets. Science gives man knowledge, which is power; religion gives man wisdom, which is control. Science deals mainly with facts; religion deals mainly with values. The two are not rivals.

The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy.

We know through painful experience that freedom is never voluntarily given by the oppressor, it must be demanded by the oppressed.

Injustice anywhere is a threat to justice everywhere. We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly.

We have also come to this hallowed spot to remind America of the fierce urgency of Now. This is no time to engage in the luxury of cooling off or to take the tranquilizing drug of gradualism. Now is the time to make real the promises of democracy.

The time is always right to do what is right.

For when people get caught up with that which is right and they are willing to sacrifice for it, there is no stopping point short of victory.

All we say to America is, 'Be true to what you said on paper.' If I lived in... any totalitarian country, maybe I could understand the denial of certain basic First Amendment privileges, because they hadn't committed themselves to that over there. But somewhere I read of the freedom of assembly. Somewhere I read of the freedom of speech. Somewhere I read of the freedom of the press. Somewhere I read that the greatness of America is the right to protest for right.

We've got some difficult days ahead. But it really doesn't matter with me now because I've been to the mountaintop . . . I've looked over and I've seen the promised land. I may not get there with you. But I want you to know tonight that we as a people will get to the promised land.

Chapter 3

THE MILITARY-INDUSTRIAL COMPLEX

3.1 The arms race prior to World War 1

The inherited tendency towards tribalism in human nature makes war possible. Humans are willing to kill and to be killed to defend their own group against perceived enemies. However, there is another element that drives and perpetuates the institution of war - the enormous amounts of money earned by arms manufacturers - the military-industrial complex against which Dwight D. Eisenhower warned in his famous farewell address.

In an article entitled *Arms Race Prior to 1914, Armament Policy*¹, Eric Brose writes: “New weapons produced during the Industrial Revolution in the late 1800s heightened existing tensions among European nations as countries strove to outpace their enemies technologically. This armaments race accelerated in the decade before 1914 as the Triple Alliance of Germany, Austria-Hungary, and Italy squared off against the Triple Entente of France, Russia, and Britain. Germany’s fears of increases in Russian armaments, and British fears of the German naval buildup, contributed heavily to the outbreak and spread of the First World War in 1914.”

The Wikipedia article on *Arms race* states that “From 1897 to 1914, a naval arms race between the United Kingdom and Germany took place. British concern about rapid increase in German naval power resulted in a costly building competition of Dreadnought-class ships. This tense arms race lasted until 1914, when the war broke out. After the war, a new arms race developed among the victorious Allies, which was temporarily ended by the Washington Naval Treaty.

“In addition to the British and Germans, contemporaneous but smaller naval arms races also broke out between Russia and the Ottoman Empire; the Ottomans and Greece; France and Italy; the United States and Japan; and Brazil, Argentina, and Chile.

“The United Kingdom had the largest navy in the world. In accord with Wilhelm II’s enthusiasm for an expanded German navy and the strong desires of Grand Admiral

¹International Encyclopedia of the First World War

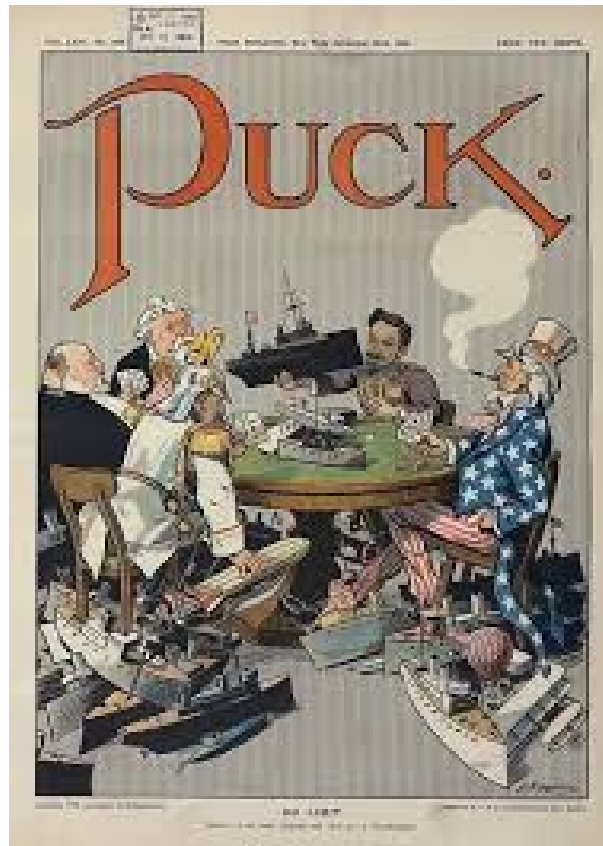


Figure 3.1: Left to right, US, Britain, Germany, France and Japan, engage in a “no limits” game for naval supremacy.

Alfred von Tirpitz, Secretary of State of the German Imperial Naval Office, four Fleet Acts from 1898 and 1912 greatly expanded the German High Seas Fleet. The German aim was to build a fleet that would be two thirds the size of the British navy. The plan was sparked by the threat of the British Foreign Office in March 1897, after the British invasion of Transvaal that started the Boer War, of blockading the German coast and thereby crippling the German economy if Germany intervened in the conflict in Transvaal. From 1905 onward, the British navy developed plans for such a blockade, which was a central part of British strategy.

“In reaction to the challenge to its naval supremacy, from 1902 to 1910, the British Royal Navy embarked on a massive expansion to keep ahead of the Germans. The competition came to focus on the revolutionary new ships based on HMS Dreadnought, which was launched in 1906.”

3.2 Krupp, Thyssen and Germany's steel industry

The Krupp family business, known as Friedrich Krupp AG, was the largest company in Europe at the beginning of the 20th century. It was important to weapons development and production in both world wars. One of the most powerful dynasties in European history, for 400 years Krupp flourished as the premier weapons manufacturer for Germany. From the Thirty Years' War until the end of the Second World War, they produced everything from battleships, U-boats, tanks, howitzers, guns, utilities, and hundreds of other commodities.

The Thyssen family similarly profited from the arms races prior to World War I and World War II. August Thyssen (1842-1925) founded a large iron and steel company in the Ruhr district of Germany, and was succeeded by his son Fritz Thyssen, who greatly aided Hitler's rise to power.

3.3 Colonialism and the outbreak of the First World War

The First World War broke out approximately 100 years ago, and much thought has been given to the causes of this tragic event, whose consequences continue to cast a dark shadow over the human future. When the war ended four years later, ten million young men had been killed and twenty million wounded, of whom six million were crippled for life. The war had cost 350,000,000,000 1919 dollars. This was a calculable cost; but the cost in human suffering and brutalization of values was incalculable.

It hardly mattered whose fault the catastrophe had been. Perhaps the Austrian government had been more to blame than any other. But blame for the war certainly did not rest with the Austrian people nor with the young Austrians who had been forced to fight. However, the tragedy of the First World War was that it created long-lasting hatred between the nations involved; and in this way it led, only twenty years later, to an even more catastrophic global war, during the course of which nuclear weapons were developed.

Most scholars believe that competing colonial ambitions played an important role in setting the stage for the First World War. A second factor was an armaments race between European countries, and the huge profits gained by arms manufacturers. Even at that time, the Military-industrial complex was firmly established; and today it continues to be the greatest source of war, together with neocolonialism.²

²<http://alphahistory.com/worldwar1/imperialism/>
<http://www.flowofhistory.com/units/etc/19/26>
<http://alphahistory.com/worldwar1/militarism/>



Figure 3.2: Map of European colonies in Africa in 1914, just before the First World War. Source: www.createdebate.com

3.4 Prescott Bush and Hitler

Prescott Sheldon Bush (1895-1972), the father of George H.W. Bush and grandfather of George W. Bush, actively supported the revival of Germany's armament's industry in the 1930's, as well as supplying large amounts of money to Adolf Hitler's Nazi Party.³

An article in *The Guardian*⁴, Ben Aris and Dubcab Campbell write that "George Bush's grandfather, the late US senator Prescott Bush, was a director and shareholder of companies that profited from their involvement with the financial backers of Nazi Germany.

"The Guardian has obtained confirmation from newly discovered files in the US National Archives that a firm of which Prescott Bush was a director was involved with the financial architects of Nazism.

"His business dealings, which continued until his company's assets were seized in 1942 under the Trading with the Enemy Act, has led more than 60 years later to a civil action for damages being brought in Germany against the Bush family by two former slave laborers at Auschwitz and to a hum of pre-election controversy.

"The debate over Prescott Bush's behavior has been bubbling under the surface for some time. There has been a steady Internet chatter about the "Bush/Nazi" connection,

³<https://www.youtube.com/watch?v=TnHnjmCYjy4>
<https://www.youtube.com/watch?v=7BZCfbrXKs4>
<https://www.youtube.com/watch?v=7BZCfbrXKs4>
<http://www.georgewalkerbush.net/bushfamilyfundedhitler.htm>
<http://www.theguardian.com/world/2004/sep/25/usa.secondworldwar>

⁴September 25, 2004



Figure 3.3: **Prescott Bush, the father of George H.W. Bush and grandfather of George W. Bush, supported Hitler’s rise to power with large financial contributions to the Nazi Party. The photo shows them together. Source: topinfo-post.com**

much of it inaccurate and unfair. But the new documents, many of which were only declassified last year, show that even after America had entered the war and when there was already significant information about the Nazis’ plans and policies, he worked for and profited from companies closely involved with the very German businesses that financed Hitler’s rise to power. It has also been suggested that the money he made from these dealings helped to establish the Bush family fortune and set up its political dynasty.

“Bush was also on the board of at least one of the companies that formed part of a multinational network of front companies to allow [Fritz] Thyssen to move assets around the world.

“Thyssen owned the largest steel and coal company in Germany and grew rich from Hitler’s efforts to re-arm between the two world wars. One of the pillars in Thyssen’s international corporate web, UBC, worked exclusively for, and was owned by, a Thyssen-controlled bank in the Netherlands. More tantalizing are Bush’s links to the Consolidated Silesian Steel Company (CSSC), based in mineral rich Silesia on the German-Polish border. During the war, the company made use of Nazi slave labor from the concentration camps, including Auschwitz. The ownership of CSSC changed hands several times in the 1930s, but documents from the US National Archive declassified last year link Bush to CSSC, although it is not clear if he and UBC were still involved in the company when Thyssen’s American assets were seized in 1942.”

3.5 Fritz Thyssen supports Hitler's rise to power

"In 1923, Thyssen met former General Erich Ludendorff, who advised him to attend a speech given by Adolf Hitler, leader of the Nazi Party. Thyssen was impressed by Hitler and his bitter opposition to the Treaty of Versailles, and began to make large donations to the party, including 100,000 gold marks in 1923 to Ludendorff. In this he was unusual among German business leaders, as most were traditional conservatives who regarded the Nazis with suspicion. Thyssen's principal motive in supporting the National Socialists was his great fear of communism; he had little confidence that the various German anticommunist factions would prevent a Soviet-style revolution in Germany unless the popular appeal of communism among the lower classes was co-opted by an anticommunist alternative. Postwar investigators found that he had donated 650,000 Reichsmarks to right-wing parties, mostly to the Nazis, although Thyssen himself claimed to have donated 1 million marks to the Nazi Party. Thyssen remained a member of the German National People's Party until 1932, and did not join the Nazi Party (National Socialist German Workers' Party) until 1933.

"In November, 1932, Thyssen and Hjalmar Schacht were the main organizers of a letter to President Paul von Hindenburg urging him to appoint Hitler as Chancellor. Thyssen also persuaded the Association of German Industrialists to donate 3 million Reichsmarks to the Nazi Party (National Socialist German Workers' Party) for the March, 1933 Reichstag election. As a reward, he was elected a Nazi member of the Reichstag and appointed to the Council of State of Prussia, the largest German state (both purely honorary positions).

"Thyssen welcomed the suppression of the Communist Party, the Social Democrats and the trade unions. In 1934 he was one of the business leaders who persuaded Hitler to suppress the SA, leading to the "Night of the Long Knives". Thyssen accepted the exclusion of Jews from German business and professional life by the Nazis, and dismissed his own Jewish employees. But as a Catholic, he objected to the increasing repression of the Roman Catholic Church, which gathered pace after 1935: in 1937 he sent a letter to Hitler, protesting the persecution of Christians in Germany.[4] The breaking point for Thyssen was the violent pogrom against the Jews in November 1938, known as Kristallnacht, which caused him to resign from the Council of State. By 1939 he was also bitterly criticizing the regime's economic policies, which were subordinating everything to rearmament in preparation for war."



Figure 3.4: An arms race between the major European powers contributed to the start of World War I.



Figure 3.5: World War I was called “The War to End All Wars”. Today it seems more like The War that Began All Wars.



Figure 3.6: The naval arms race, which contributed to the start of World War I, enriched steel manufacturers and military shipbuilders.



Figure 3.7: Who is the leader, and who the follower?

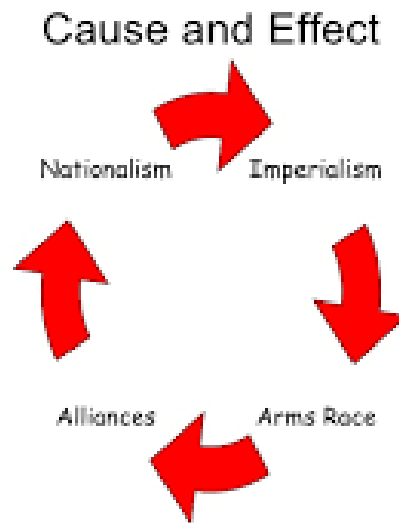


Figure 3.8: A vicious circle.



Figure 3.9: Ready, set, go!

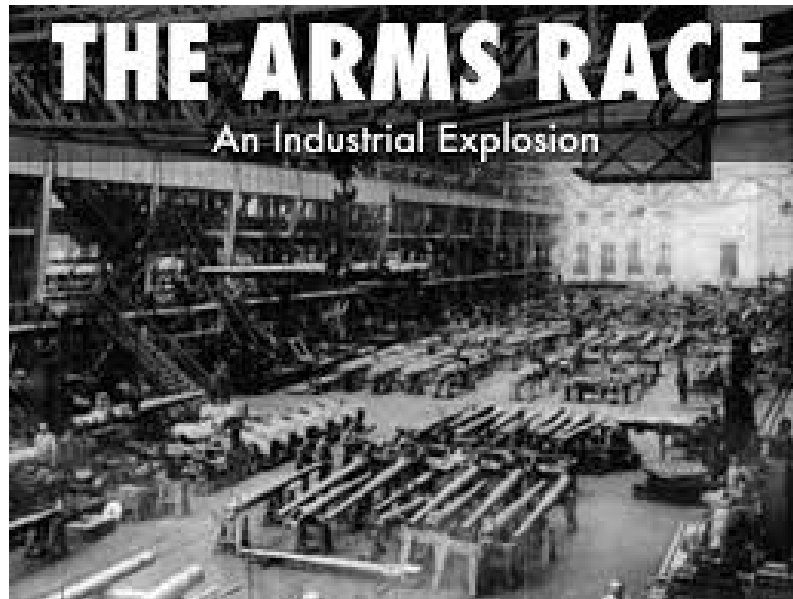


Figure 3.10: If our economies depend on armaments industries, it is an unhealthy dependence, analogous to drug addiction.



Figure 3.11: The nuclear arms race casts a dark shadow over the future of human civilization and the biosphere.



Figure 3.12: During the Cuban Missile Crisis, the world came close to a catastrophic thermonuclear war.

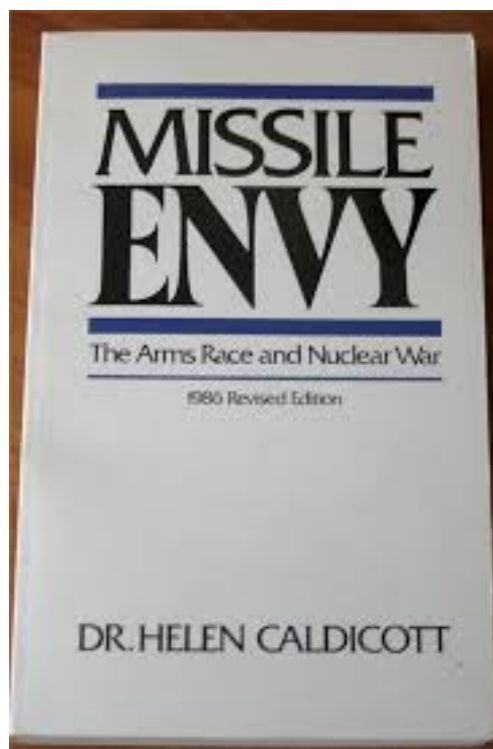


Figure 3.13: Dr. Helen Caldecott has worked to document the dangers of both nuclear weapons and nuclear power generation.



Figure 3.14: We must listen to the wise words of Dr. Martin Luther King, Jr.

3.6 Eisenhower's farewell address

In his famous farewell address, US President Dwight Eisenhower eloquently described the terrible effects of an overgrown Military-industrial complex. Here are his words:

"We have been compelled to create a permanent armaments industry of vast proportions.... This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence, economic, political, even spiritual, is felt in every city, every State house, every office of the Federal government...[and] we must not fail to comprehend its grave implications. Our toil, resources and livelihood are all involved; so is the very structure of our society.

"In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the Military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist."

In another speech, he said: "Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed. This world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children."

Today the world spends more than 1.7 trillion dollars (\$ 1,700,000,000,000) every year on armaments. This vast river of money, almost too large to be imagined, is the "devil's dynamo" driving the institution of war. Politicians notoriously can be bought with a tiny fraction of this enormous amount; hence the decay of democracy. It is also plain that if the almost unbelievable sums now wasted on armaments were used constructively, most of the pressing problems now facing humanity could be solved.

Because the world spends almost two thousand billion dollars each year on armaments, it follows that very many people make their living from war. This is the reason why it is correct to speak of war as an institution, and why it persists, although we know that it is the cause of much of the suffering that inflicts humanity.

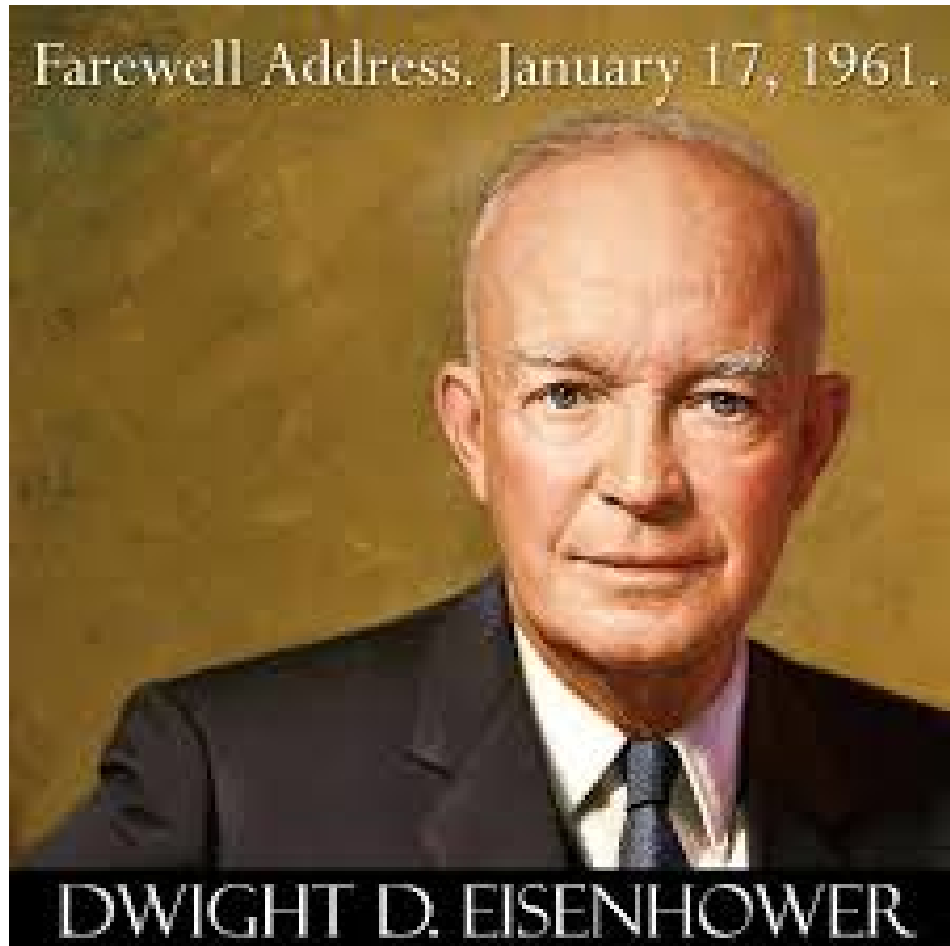


Figure 3.15: “In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the Military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.”

3.7 The nuclear arms race

Flaws in the concept of nuclear deterrence

Before discussing other defects in the concept of deterrence, it must be said very clearly that the idea of “massive nuclear retaliation” is completely unacceptable from an ethical point of view. The doctrine of retaliation, performed on a massive scale, violates not only the principles of common human decency and common sense, but also the ethical principles of every major religion. Retaliation is especially contrary to the central commandment of Christianity which tells us to love our neighbor, even if he or she is far away from us, belonging to a different ethnic or political group, and even if our distant neighbor has seriously injured us. This principle has a fundamental place not only in Christianity but also in all other major religions. “Massive retaliation” completely violates these very central ethical principles, which are not only clearly stated and fundamental but also very practical, since they prevent escalatory cycles of revenge and counter-revenge.

Contrast Christian ethics with estimates of the number of deaths that would follow a US nuclear strike against Russia: Several hundred million deaths. These horrifying estimates shock us not only because of the enormous magnitude of the expected mortality, but also because the victims would include people of every kind: women, men, old people, children and infants, completely irrespective of any degree of guilt that they might have. As a result of such an attack, many millions of people in neutral countries would also die. This type of killing has to be classified as genocide.

When a suspected criminal is tried for a wrongdoing, great efforts are devoted to clarifying the question of guilt or innocence. Punishment only follows if guilt can be proved beyond any reasonable doubt. Contrast this with the totally indiscriminate mass slaughter that results from a nuclear attack!

It might be objected that disregard for the guilt or innocence of victims is a universal characteristic of modern war, since statistics show that, with time, a larger and larger percentage of the victims have been civilians, and especially children. For example, the air attacks on Coventry during World War II, or the fire bombings of Dresden and Tokyo, produced massive casualties which involved all segments of the population with complete disregard for the question of guilt or innocence. The answer, I think, is that modern war has become generally unacceptable from an ethical point of view, and this unacceptability is epitomized in nuclear weapons.

The enormous and indiscriminate destruction produced by nuclear weapons formed the background for an historic 1996 decision by the International Court of Justice in the Hague. In response to questions put to it by WHO and the UN General Assembly, the Court ruled that “the threat and use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and particularly the principles and rules of Humanitarian law.”

The only *possible* exception to this general rule might be “an extreme circumstance of self-defense, in which the very survival of a state would be at stake”. But the Court refused to say that even in this extreme circumstance the threat or use of nuclear weapons



would be legal. It left the exceptional case undecided. In addition, the World Court added unanimously that “there exists an obligation to pursue in good faith *and bring to a conclusion* negotiations leading to nuclear disarmament in all its aspects under strict international control.”

This landmark decision has been criticized by the nuclear weapon states as being decided “by a narrow margin”, but the structuring of the vote made the margin seem more narrow than it actually was. Seven judges voted against Paragraph 2E of the decision (the paragraph which states that the threat or use of nuclear weapons would be generally illegal, but which mentions as a possible exception the case where a nation might be defending itself from an attack that threatened its very existence.) Seven judges voted for the paragraph, with the President of the Court, Muhammad Bedjaoui of Algeria casting the deciding vote. Thus the Court adopted it, seemingly by a narrow margin. But three of the judges who voted against 2E did so because they believed that no possible exception should be mentioned! Thus, if the vote had been slightly differently structured, the result would have been ten to four.

Of the remaining four judges who cast dissenting votes, three represented nuclear weapons states, while the fourth thought that the Court ought not to have accepted the questions from WHO and the UN. However Judge Schwebel from the United States, who voted against Paragraph 2E, nevertheless added, in a separate opinion, “It cannot be accepted that the use of nuclear weapons on a scale which would - or could - result in the deaths of many millions in indiscriminate inferno and by far-reaching fallout, have pernicious effects in space and time, and render uninhabitable much of the earth, could be lawful.” Judge Higgins from the UK, the first woman judge in the history of the Court, had problems with the word “generally” in Paragraph 2E and therefore voted against it, but she thought that a more profound analysis might have led the Court to conclude in favor of illegality in all circumstances. Judge Fleischhauer of Germany said in his separate

opinion, “The nuclear weapon is, in many ways, the negation of the humanitarian considerations underlying the law applicable in armed conflict and the principle of neutrality. The nuclear weapon cannot distinguish between civilian and military targets. It causes immeasurable suffering. The radiation released by it is unable to respect the territorial integrity of neutral States.”

President Bedjaoui, summarizing the majority opinion, called nuclear weapons “the ultimate evil”, and said “By its nature, the nuclear weapon, this blind weapon, destabilizes Humanitarian law, the law of discrimination in the use of weapons... The ultimate aim of every action in the field of nuclear arms will always be nuclear disarmament, an aim which is no longer utopian and which all have a duty to pursue more actively than ever.”

Thus the concept of nuclear deterrence is not only unacceptable from the standpoint of ethics; it is also contrary to international law. The World Court’s 1996 advisory Opinion unquestionably also represents the opinion of the majority of the world’s peoples. Although no formal plebiscite has been taken, the votes in numerous resolutions of the UN General Assembly speak very clearly on this question. For example the New Agenda Resolution (53/77Y) was adopted by the General Assembly on 4 December 1998 by a massively affirmative vote, in which only 18 out of the 170 member states voted against the resolution.⁵ The New Agenda Resolution proposes numerous practical steps towards complete nuclear disarmament, and it calls on the Nuclear-Weapon States “to demonstrate an unequivocal commitment to the speedy and total elimination of their nuclear weapons and without delay to pursue in good faith and bring to a conclusion negotiations leading to the elimination of these weapons, thereby fulfilling their obligations under Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)”. Thus, in addition to being ethically unacceptable and contrary to international law, nuclear weapons also contrary to the principles of democracy.

Having said these important things, we can now turn to some of the other defects in the concept of nuclear deterrence. One important defect is that nuclear war may occur through accident or miscalculation - through technical defects or human failings. This possibility is made greater by the fact that despite the end of the Cold War, thousands of missiles carrying nuclear warheads are still kept on a “hair-trigger” state of alert with a quasi-automatic reaction time measured in minutes. There is a constant danger that a nuclear war will be triggered by error in evaluating the signal on a radar screen. For example, the BBC reported recently that a group of scientists and military leaders are worried that a small asteroid entering the earths atmosphere and exploding could trigger a nuclear war if mistaken for a missile strike.

A number of prominent political and military figures (many of whom have ample knowledge of the system of deterrence, having been part of it) have expressed concern about the danger of accidental nuclear war. Colin S. Grey⁶ expressed this concern as follows: “The problem, indeed the enduring problem, is that we are resting our future upon a nuclear

⁵Of the 18 countries that voted against the New Agenda resolution, 10 were Eastern European countries hoping for acceptance into NATO, whose votes seem to have been traded for increased probability of acceptance.

⁶Chairman, National Institute for Public Policy

deterrence system concerning which we cannot tolerate even a single malfunction.” General Curtis E. LeMay⁷ has written, “In my opinion a general war will grow through a series of political miscalculations and accidents rather than through any deliberate attack by either side.” Bruce G. Blair⁸ has remarked that “It is obvious that the rushed nature of the process, from warning to decision to action, risks causing a catastrophic mistake.”... “This system is an accident waiting to happen.”

“But nobody can predict that the fatal accident or unauthorized act will never happen”, Fred Ikle of the Rand Corporation has written, “Given the huge and far-flung missile forces, ready to be launched from land and sea on on both sides, the scope for disaster by accident is immense... In a matter of seconds - through technical accident or human failure - mutual deterrence might thus collapse.”

Another serious failure of the concept of nuclear deterrence is that it does not take into account the possibility that atomic bombs may be used by terrorists. Indeed, the threat of nuclear terrorism has today become one of the most pressing dangers that the world faces, a danger that is particularly acute in the United States.

Since 1945, more than 3,000 metric tons (3,000,000 kilograms) of highly enriched uranium and plutonium have been produced - enough for several hundred thousand nuclear weapons. Of this, roughly a million kilograms are in Russia, inadequately guarded, in establishments where the technicians are poorly paid and vulnerable to the temptations of bribery. There is a continuing danger that these fissile materials will fall into the hands of terrorists, or organized criminals, or irresponsible governments. Also, an extensive black market for fissile materials, nuclear weapons components etc. has recently been revealed in connection with the confessions of Pakistan’s bomb-maker, Dr. A.Q. Khan. Furthermore, if Pakistan’s less-than-stable government should be overthrown, complete nuclear weapons could fall into the hands of terrorists.

On November 3, 2003, Mohamed ElBaradei, Director General of the International Atomic Energy Agency, made a speech to the United Nations in which he called for “limiting the processing of weapons-usable material (separated plutonium and high enriched uranium) in civilian nuclear programmes - as well as the production of new material through reprocessing and enrichment - by agreeing to restrict these operations to facilities exclusively under international control.” It is almost incredible, considering the dangers of nuclear proliferation and nuclear terrorism, that such restrictions were not imposed long ago. Nuclear reactors used for “peaceful” purposes unfortunately also generate fissionable isotopes of plutonium, neptunium and americium. Thus all nuclear reactors must be regarded as ambiguous in function, and all must be put under strict international control. One might ask, in fact, whether globally widespread use of nuclear energy is worth the danger that it entails.

The Italian nuclear physicist Francesco Calogero, who has studied the matter closely, believes that terrorists could easily construct a simple gun-type nuclear bomb if they were in possession of a critical mass of highly enriched uranium. In such a simple atomic bomb,

⁷Founder and former Commander in Chief of the United States Strategic Air Command

⁸Brookings Institute

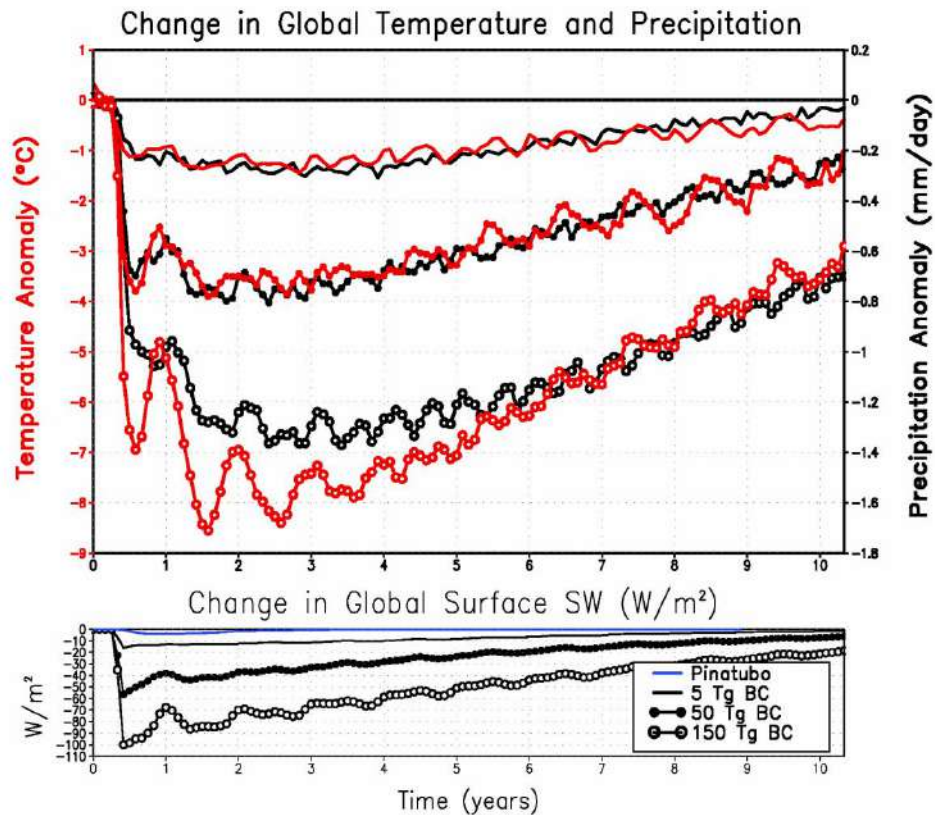


Figure 3.16: Recent studies by atmospheric scientists have shown that the smoke from burning cities produced by even a limited nuclear war would have a devastating effect on global agriculture. The studies show that the smoke would rise to the stratosphere, where it would spread globally and remain for a decade, blocking sunlight and destroying the ozone layer. Because of the devastating effect on global agriculture, darkness from even a small nuclear war (e.g. between India and Pakistan) would result in an estimated billion deaths from famine. Nuclear darkness resulting from a large-scale war involving all of the nuclear weapons that are now on high alert status would destroy all agriculture on earth for a period of ten years, and almost all humans would die of starvation. (See O. Toon, A. Robock, and R. Turco, "The Environmental Consequences of Nuclear War", *Physics Today*, vol. 61, No. 12, 2008, p. 37-42).

two grapefruit-sized subcritical portions of HEU are placed at opposite ends of the barrel of an artillery piece and are driven together by means of a conventional explosive. Prof. Calogero estimates that the fatalities produced by the explosion of such a device in the center of a large city could exceed 100,000.

We must remember the remark of U.N. Secretary General Kofi Annan after the 9/11/2001 attacks on the World Trade Center. He said, “*This time* it was not a nuclear explosion”. The meaning of his remark is clear: If the world does not take strong steps to eliminate fissionable materials and nuclear weapons, it will only be a matter of time before they will be used in terrorist attacks on major cities. Neither terrorists nor organized criminals can be deterred by the threat of nuclear retaliation, since they have no territory against which such retaliation could be directed. They blend invisibly into the general population. Nor can a “missile defense system” prevent terrorists from using nuclear weapons, since the weapons can be brought into a port in any one of the hundreds of thousands of containers that enter on ships each year, a number far too large to be checked exhaustively.

Today we must give special weight to the danger that a catastrophic nuclear war may occur through the mental instability of a political leader or an error of judgement, since we now are living with Donald Trump and Kim Jong-un. In the words of ICAN’s Executive Director Beatrice Finn, the end of human civilization and much of the biosphere is “only a tantrum away”. Donald Trump has repeatedly expressed his desire for more “usable” nuclear weapons. and if nuclear weapons are ever used, there is a strong danger of escalation to a full-scale thermonuclear war.

Another problem with the concept of nuclear deterrence is that even if the danger that a catastrophic nuclear war will occur in any given year is small, over a long period of time the danger builds up into a certainty. If the dangers for any given year are 1%, 2% or 3%, the probabilities of are survival until 2100 are respectively 43%, 18% and 8%. If the period for which we must survive is extended to the year 2200, the chances of survival in the three cases are respectively .16%, .025%, and .0039%.

In this perilous situation, the only logical thing for the world to do is to get rid of both fissile materials and nuclear weapons as rapidly as possible. We must acknowledge that the idea of nuclear deterrence is a dangerous fallacy, and acknowledge that the development of military systems based on nuclear weapons has been a terrible mistake, a false step that needs to be reversed. If the most prestigious of the nuclear weapons states can sincerely acknowledge their mistakes and begin to reverse them, nuclear weapons will seem less glamorous to countries like India, Pakistan, North Korea and Iran, where they now are symbols of national pride and modernism.

Civilians have for too long played the role of passive targets, hostages in the power struggles of politicians. It is time for civil society to make its will felt. If our leaders continue to enthusiastically support the institution of war, if they will not abolish nuclear weapons, then let us have new leaders.

3.8 Global famine produced by nuclear war

The danger of a catastrophic nuclear war casts a dark shadow over the future of our species. It also casts a very black shadow over the future of the global environment. The environmental consequences of a massive exchange of nuclear weapons have been treated in a number of studies by meteorologists and other experts from both East and West. They predict that a large-scale use of nuclear weapons would result in fire storms with very high winds and high temperatures, which would burn a large proportion of the wild land fuels in the affected nations. The resulting smoke and dust would block out sunlight for a period of many months, at first only in the northern hemisphere but later also in the southern hemisphere.

Temperatures in many places would fall far below freezing, and much of the earth's plant life would be killed. Animals and humans would then die of starvation. The nuclear winter effect was first discovered as a result of the Mariner 9 spacecraft exploration of Mars in 1971. The spacecraft arrived in the middle of an enormous dust-storm on Mars, and measured a large temperature drop at the surface of the planet, accompanied by a heating of the upper atmosphere. These measurements allowed scientists to check their theoretical models for predicting the effect of dust and other pollutants distributed in planetary atmospheres.

Using experience gained from the studies of Mars, R.P. Turco, O.B. Toon, T. Ackerman, J.B. Pollack and C. Sagan made a computer study of the climatic effects of the smoke and dust that would result from a large-scale nuclear war. This early research project is sometimes called the TTAPS Study, after the initials of the authors.

In April 1983, a special meeting was held in Cambridge, Massachusetts, where the results of the TTAPS Study and other independent studies of the nuclear winter effect were discussed by more than 100 experts. Their conclusions were presented at a forum in Washington, D.C., the following December, under the chairmanship of U.S. Senators Kennedy and Hatfield. The numerous independent studies of the nuclear winter effect all agreed of the following main predictions:

High-yield nuclear weapons exploded near the earth's surface would put large amounts of dust into the upper atmosphere. Nuclear weapons exploded over cities, forests, oilfields and refineries would produce fire storms of the type experienced in Dresden and Hamburg after incendiary bombings during the Second World War. The combination of high-altitude dust and lower altitude soot would prevent sunlight from reaching the earth's surface, and the degree of obscuration would be extremely high for a wide range of scenarios.

A baseline scenario used by the TTAPS study assumes a 5,000-megaton nuclear exchange, but the threshold for triggering the nuclear winter effect is believed to be much lower than that. After such an exchange, the screening effect of pollutants in the atmosphere might be so great that, in the northern and middle latitudes, the sunlight reaching the earth would be only 1% of ordinary sunlight on a clear day, and this effect would persist for many months. As a result, the upper layers in the atmosphere might rise in temperature by as much as 100 °C, while the surface temperatures would fall, perhaps by as much as 50 °C.

The temperature inversion produced in this way would lead to superstability, a condition in which the normal mixing of atmospheric layers is suppressed. The hydrological cycle (which normally takes moist air from the oceans to a higher and cooler level, where the moisture condenses as rain) would be strongly suppressed. Severe droughts would thus take place over continental land masses. The normal cleansing action of rain would be absent in the atmosphere, an effect which would prolong the nuclear winter.

In the northern hemisphere, forests would die because of lack of sunlight, extreme cold, and drought. Although the temperature drop in the southern hemisphere would be less severe, it might still be sufficient to kill a large portion of the tropical forests, which normally help to renew the earth's oxygen.

The oxygen content of the atmosphere would then fall dangerously, while the concentration of carbon dioxide and oxides of nitrogen produced by firestorms would remain high. The oxides of nitrogen would ultimately diffuse to the upper atmosphere, where they would destroy the ozone layer.

Thus, even when the sunlight returned after an absence of many months, it would be sunlight containing a large proportion of the ultraviolet frequencies which are normally absorbed by the ozone in the stratosphere, and therefore a type of light dangerous to life. Finally, after being so severely disturbed, there is no guarantee that the global climate would return to its normal equilibrium.

Even a nuclear war below the threshold of nuclear winter might have climatic effects very damaging to human life. Professor Paul Ehrlich, of Stanford University, has expressed this in the following words:

"...A smaller war, which set off fewer fires and put less dust into the atmosphere, could easily depress temperatures enough to essentially cancel grain production in the northern hemisphere. That in itself would be the greatest catastrophe ever delivered upon Homo Sapiens, just that one thing, not worrying about prompt effects. Thus even below the threshold, one cannot think of survival of a nuclear war as just being able to stand up after the bomb has gone off."⁹

⁹<http://www.voanews.com/content/pope-francis-calls-for-nuclear-weapons-ban/2909357.html>
<http://www.cadmusjournal.org/article/issue-4/flaws-concept-nuclear-deterrence>
<http://www.countercurrents.org/avery300713.htm>
<https://www.wagingpeace.org/author/john-avery/>
<http://www.commondreams.org/news/2015/08/06/70-years-after-bombing-hiroshima-calls-abolish-nuclear-weapons>
<http://www.informationclearinghouse.info/article42488.htm>
<http://www.informationclearinghouse.info/article42492.htm>
<http://www.commondreams.org/views/2015/08/06/hiroshima-and-nagasaki-remembering-power>
<http://human-wrongs-watch.net/2015/07/22/israel-iran-and-the-nuclear-non-proliferation-treaty/>
<http://human-wrongs-watch.net/2015/06/25/militarisms-hostages/>
<http://human-wrongs-watch.net/2015/05/24/the-path-to-zero-dialogues-on-nuclear-dangers-by-richard-falk-and-david-krieger/>
<http://human-wrongs-watch.net/2015/03/30/europe-must-not-be-forced-into-a-nuclear-war-with-russia/>
<http://www.truth-out.org/opinion/item/32073-the-us-should-eliminate-its-nuclear-arsenal-not-modernize-it>
<http://www.cadmusjournal.org/article/issue-4/flaws-concept-nuclear-deterrence>

A 2012 report published by International Physicians for the Prevention of Nuclear War states that even a small local nuclear war between India and Pakistan would put two billion people at risk of starvation.

3.9 Dangers of nuclear power generation

The Chernobyl disaster

The dangers of nuclear power generation are exemplified by the Chernobyl disaster: On the 26th of April, 1986, during the small hours of the morning, the staff of the Chernobyl nuclear reactor in Ukraine turned off several safety systems in order to perform a test. The result was a core meltdown in Reactor 4, causing a chemical explosion that blew off the reactor's 1,000-ton steel and concrete lid. 190 tons of highly radioactive uranium and graphite were hurled into the atmosphere. The resulting radioactive fallout was 200 times greater than that caused by the nuclear bombs that destroyed Hiroshima and Nagasaki. The radioactive cloud spread over Belarus, Ukraine, Russia, Finland, Sweden and Eastern Europe, exposing the populations of these regions to levels of radiation 100 times the normal background. Ultimately, the radioactive cloud reached as far as Greenland and parts of Asia.

The exact number of casualties resulting from the Chernobyl meltdown is a matter of controversy, but according to a United Nations report, as many as 9 million people have been adversely affected by the disaster. Since 1986, the rate of thyroid cancer in affected areas has increased ten-fold. An area of 155,000 square kilometers (almost half the size of Italy) in Belarus, Ukraine and Russia is still severely contaminated. Even as far away as Wales, hundreds of farms are still under restrictions because of sheep eating radioactive grass.

Public opinion turned against nuclear power generation as a result of the Chernobyl disaster. Had the disaster taken place in Western Europe or North America, its effect on public opinion would have been still greater. Nevertheless, because of the current energy crisis, and because of worries about global warming, a number of people are arguing that nuclear energy should be given a second chance. The counter-argument is that a large

<http://www.cadmusjournal.org/article/issue-6/arms-trade-treaty-opens-new-possibilities-u>

<http://eruditio.worldacademy.org/issue-6/article/remember-your-humanity>

<http://www.informationclearinghouse.info/article42568.htm>

<https://firstlook.org/theintercept/2014/09/23/nobel-peace-prize-fact-day-syria-7th-country-bombed-obama/>

<http://www.informationclearinghouse.info/article42577.htm>

<http://www.informationclearinghouse.info/article42580.htm>

<http://human-wrongs-watch.net/2015/08/06/us-unleashing-of-atomic-weapons-against-civilian-populations-was-a-criminal-act-of-the-first-order/>

<http://human-wrongs-watch.net/2015/08/06/hiroshima-and-nagasaki-remembering-the-power-of-peace/>

<http://human-wrongs-watch.net/2015/08/04/atomic-bombing-hear-the-story-setsuko-thurlow/>

<http://human-wrongs-watch.net/2015/08/04/atomic-bombing-hear-the-story-yasuaki-yamashita/>

<http://human-wrongs-watch.net/2015/08/03/why-nuclear-weapons/>

increase in the share of nuclear power in the total spectrum of energy production would have little effect on climate change but it would involve unacceptable dangers, not only dangers of accidents and dangers associated with radioactive waste disposal, but above all, dangers of proliferation of nuclear weapons.

Of the two bombs that destroyed Hiroshima and Nagasaki, one made use of the rare isotope of uranium, U-235, while the other used plutonium. Both of these materials can be made by a nation with a nuclear power generation program.

Reactors and nuclear weapons

Uranium has atomic number 92, i.e., a neutral uranium atom has a nucleus containing 92 positively-charged protons, around which 92 negatively-charged electrons circle. All of the isotopes of uranium have the same number of protons and electrons, and hence the same chemical properties, but they differ in the number of neutrons in their nuclei. For example, the nucleus of U-235 has 143 neutrons, while that of U-238 has 146. Notice that $92+143=235$, while $92+146=238$. The number written after the name of an element to specify a particular isotope is the number of neutrons plus the number of protons. This is called the "nucleon number", and the weight of an isotope is roughly proportional to it. This means that U-238 is slightly heavier than U-235. If the two isotopes are to be separated, difficult physical methods dependent on mass must be used, since their chemical properties are identical. In natural uranium, the amount of the rare isotope U-235 is only 0.7 percent.

A paper published in 1939 by Niels Bohr and John A. Wheeler indicated that it was the rare isotope of uranium, U-235, that undergoes fission. A bomb could be constructed, they pointed out, if enough highly enriched U-235 could be isolated from the more common isotope, U-238. Calculations later performed in England by Otto Frisch and Rudolf Peierls showed that the "critical mass" of highly enriched uranium needed is quite small: only a few kilograms.

The Bohr-Wheeler theory also predicted that an isotope of plutonium, Pu-239, should be just as fissionable as U-235¹⁰. Instead of trying to separate the rare isotope, U-235, from the common isotope, U-238, physicists could just operate a nuclear reactor until a sufficient amount of Pu-239 accumulated, and then separate it out by ordinary chemical means.

Thus in 1942, when Enrico Fermi and his coworkers at the University of Chicago produced the world's first controlled chain reaction within a pile of cans containing ordinary (nonenriched) uranium powder, separated by blocks of very pure graphite, the chain-reacting pile had a double significance: It represented a new source of energy for mankind,

¹⁰Both U-235 and Pu-239 have odd nucleon numbers. When U-235 absorbs a neutron, it becomes U-236, while when Pu-239 absorbs a neutron it becomes Pu-240. In other words, absorption of a neutron converts both these species to nuclei with even nucleon numbers. According to the Bohr-Wheeler theory, nuclei with even nucleon numbers are especially tightly-bound. Thus absorption of a neutron converts U-235 to a highly-excited state of U-236, while Pu-239 is similarly converted to a highly excited state of Pu-240. The excitation energy distorts the nuclei to such an extent that fission becomes possible.

but it also had a sinister meaning. It represented an easy path to nuclear weapons, since one of the by-products of the reaction was a fissionable isotope of plutonium, Pu-239. The bomb dropped on Hiroshima in 1945 used U-235, while the Nagasaki bomb used Pu-239.

By reprocessing spent nuclear fuel rods, using ordinary chemical means, a nation with a power reactor can obtain weapons-usable Pu-239. Even when such reprocessing is performed under international control, the uncertainty as to the amount of Pu-239 obtained is large enough so that the operation might superficially seem to conform to regulations while still supplying enough Pu-239 to make many bombs.

The enrichment of uranium¹¹ is also linked to reactor use. Many reactors of modern design make use of low enriched uranium (LEU) as a fuel. Nations operating such a reactor may claim that they need a program for uranium enrichment in order to produce LEU for fuel rods. However, by operating their ultracentrifuges a little longer, they can easily produce highly enriched uranium (HEU), i.e., uranium containing a high percentage of the rare isotope U-235, and therefore usable in weapons.

Known reserves of uranium are only sufficient for the generation of 8×10^{20} joules of electrical energy¹², i.e., about 25 TWy. It is sometimes argued that a larger amount of electricity could be obtained from the same amount of uranium through the use of fast breeder reactors, but this would involve totally unacceptable proliferation risks. In fast breeder reactors, the fuel rods consist of highly enriched uranium. Around the core, is an envelope of natural uranium. The flux of fast neutrons from the core is sufficient to convert a part of the U-238 in the envelope into Pu-239, a fissionable isotope of plutonium.

Fast breeder reactors are prohibitively dangerous from the standpoint of nuclear proliferation because both the highly enriched uranium from the fuel rods and the Pu-239 from the envelope are directly weapons-usable. It would be impossible, from the standpoint of equity, to maintain that some nations have the right to use fast breeder reactors, while others do not. If all nations used fast breeder reactors, the number of nuclear weapons states would increase drastically.

It is interesting to review the way in which Israel, South Africa, Pakistan, India and North Korea¹³ obtained their nuclear weapons, since in all these cases the weapons were constructed under the guise of “atoms for peace”, a phrase that future generations may someday regard as being tragically self-contradictory.

Israel began producing nuclear weapons in the late 1960's (with the help of a “peaceful” nuclear reactor provided by France, and with the tacit approval of the United States) and the country is now believed to possess 100-150 of them, including neutron bombs. Israel's policy is one of visibly possessing nuclear weapons while denying their existence.

South Africa, with the help of Israel and France, also weaponized its civil nuclear program, and it tested nuclear weapons in the Indian Ocean in 1979. In 1991 however, South Africa destroyed its nuclear weapons and signed the NPT.

¹¹i.e. production of uranium with a higher percentage of U-235 than is found in natural uranium

¹²Craig, J.R., Vagn, D.J. and Skinner, B.J., *Resources of the Earth: Origin, Use and Environmental Impact, Third Edition*, page 210.

¹³Israel, India and Pakistan have refused to sign the Nuclear Non-Proliferation Treaty, and North Korea, after signing the NPT, withdrew from it in 2003.

India produced what it described as a “peaceful nuclear explosion” in 1974. By 1989 Indian scientists were making efforts to purify the lithium-6 isotope, a key component of the much more powerful thermonuclear bombs. In 1998, India conducted underground tests of nuclear weapons, and is now believed to have roughly 60 warheads, constructed from Pu-239 produced in “peaceful” reactors.

Pakistan’s efforts to obtain nuclear weapons were spurred by India’s 1974 “peaceful nuclear explosion”. As early as 1970, the laboratory of Dr. Abdul Qadeer Khan, (a metallurgist who was to become Pakistan’s leading nuclear bomb maker) had been able to obtain from a Dutch firm the high-speed ultracentrifuges needed for uranium enrichment. With unlimited financial support and freedom from auditing requirements, Dr. Khan purchased restricted items needed for nuclear weapon construction from companies in Europe and the United States. In the process, Dr. Khan became an extremely wealthy man. With additional help from China, Pakistan was ready to test five nuclear weapons in 1998. The Indian and Pakistani nuclear bomb tests, conducted in rapid succession, presented the world with the danger that these devastating weapons would be used in the conflict over Kashmir. Indeed, Pakistan announced that if a war broke out using conventional weapons, Pakistan’s nuclear weapons would be used “at an early stage”.

In Pakistan, Dr. A.Q. Khan became a great national hero. He was presented as the person who had saved Pakistan from attack by India by creating Pakistan’s own nuclear weapons. In a Washington Post article¹⁴ Pervez Hoodbhoy wrote: “Nuclear nationalism was the order of the day as governments vigorously promoted the bomb as the symbol of Pakistan’s high scientific achievement and self-respect...” Similar manifestations of nuclear nationalism could also be seen in India after India’s 1998 bomb tests.

Early in 2004, it was revealed that Dr. Khan had for years been selling nuclear secrets and equipment to Libya, Iran and North Korea, and that he had contacts with Al-Qaeda. However, observers considered that it was unlikely that Khan would be tried, since a trial might implicate Pakistan’s army as well as two of its former prime ministers.

Recent assassination attempts directed at Pakistan’s President, Pervez Musharraf, emphasize the precariousness of Pakistan’s government. There a danger that it may be overthrown, and that the revolutionists would give Pakistan’s nuclear weapons to a subnational organization. This type of danger is a general one associated with nuclear proliferation. As more and more countries obtain nuclear weapons, it becomes increasingly likely that one of them will undergo a revolution, during the course of which nuclear weapons will fall into the hands of criminals or terrorists.

If nuclear reactors become the standard means for electricity generation as the result of a future energy crisis, the number of nations possessing nuclear weapons might ultimately be as high as 40. If this should happen, then over a long period of time the chance that one or another of these nations would undergo a revolution during which the weapons would fall into the hands of a subnational group would gradually grow into a certainty.

There is also a possibility that poorly-guarded fissionable material could fall into the hands of subnational groups, who would then succeed in constructing their own nuclear

¹⁴1 February, 2004

weapons. Given a critical mass of highly-enriched uranium, a terrorist group, or an organized criminal (Mafia) group, could easily construct a crude gun-type nuclear explosive device. Pu-239 is more difficult to use since it is highly radioactive, but the physicist Frank Barnaby believes that a subnational group could nevertheless construct a crude nuclear bomb (of the Nagasaki type) from this material.

We must remember the remark of U.N. Secretary General Kofi Annan after the 9/11/2001 attacks on the World Trade Center. He said, "*This time* it was not a nuclear explosion". The meaning of his remark is clear: If the world does not take strong steps to eliminate fissionable materials and nuclear weapons, it will only be a matter of time before they will be used in terrorist attacks on major cities, or by organized criminals for the purpose of extortion. Neither terrorists nor organized criminals can be deterred by the threat of nuclear retaliation, since they have no territory against which such retaliation could be directed. They blend invisibly into the general population. Nor can a "missile defense system" prevent criminals or terrorists from using nuclear weapons, since the weapons can be brought into a port in any one of the hundreds of thousands of containers that enter on ships each year, a number far too large to be checked exhaustively.

Finally we must remember that if the number of nations possessing nuclear weapons becomes very large, there will be a greatly increased chance that these weapons will be used in conflicts between nations, either by accident or through irresponsible political decisions.

On November 3, 2003, Mohamed ElBaradei, Director General of the International Atomic Energy Agency, made a speech to the United Nations in which he called for "limiting the processing of weapons-usable material (separated plutonium and high enriched uranium) in civilian nuclear programs - as well as the production of new material through reprocessing and enrichment - by agreeing to restrict these operations to facilities exclusively under international control." It is almost incredible, considering the dangers of nuclear proliferation and nuclear terrorism, that such restrictions were not imposed long ago.

From the facts that we have been reviewing, we can conclude that if nuclear power generation becomes widespread during a future energy crisis, and if equally widespread proliferation of nuclear weapons is to be avoided, the powers and budget of the IAEA will have to be greatly increased. All enrichment of uranium and Reprocessing fuel rods throughout the world will have to be placed under direct international control, as has been emphasized by Mohamed ElBaradei. Because this will need to be done with fairness, such regulations will have to hold both in countries that at present have nuclear weapons and in countries that do not. It has been proposed that there should be an international fuel rod bank, to supply new fuel rods and reprocess spent ones. In addition to this excellent proposal, one might also consider a system where all power generation reactors and all research reactors would be staffed by the IAEA.

Nuclear reactors used for "peaceful" purposes unfortunately also generate fissionable isotopes of not only of plutonium, but also of neptunium and americium. Thus all nuclear reactors must be regarded as ambiguous in function, and all must be put under strict international control. One must ask whether globally widespread use of nuclear energy is worth the danger that it entails.

Let us now examine the question of whether nuclear power generation would appreciably help to prevent global warming. The fraction of nuclear power in the present energy generation spectrum is at present approximately 1/16. Nuclear energy is used primarily for electricity generation. Thus increasing the nuclear fraction would not affect the consumption of fossil fuels used directly in industry, transportation, in commerce, and in the residential sector. Coal is still a very inexpensive fuel, and an increase in nuclear power generation would do little to prevent it from being burned. Thus besides being prohibitively dangerous, and besides being unsustainable in the long run (because of finite stocks of uranium and thorium), the large-scale use of nuclear power cannot be considered to be a solution to the problem of anthropogenic climate change.

Optimists point to the possibility of using fusion of light elements, such as hydrogen, to generate power. However, although this can be done on a very small scale (and at great expense) in laboratory experiments, the practical generation of energy by means of thermonuclear reactions remains a mirage rather than a realistic prospect on which planners can rely. The reason for this is the enormous temperature required to produce thermonuclear reactions. This temperature is comparable to that existing in the interior of the sun, and it is sufficient to melt any ordinary container. Elaborate “magnetic bottles” have been constructed to contain thermonuclear reactions, and these have been used in successful very small scale experiments. However, despite 50 years of heavily-financed research, there has been absolutely no success in producing thermonuclear energy on a large scale, or at anything remotely approaching commercially competitive prices.

3.10 Military-industrial complexes today

“We’re going to take out seven countries in five years”

In an interview with Amy Goodman¹⁵, retired 4-star General Wesley Clark said: “About ten days after 9/11, I went through the Pentagon and I saw Secretary Rumsfeld and Deputy Secretary Wolfowitz. I went downstairs just to say hello to some of the people on the Joint Staff who used to work for me, any one of the generals called me in. He said, “Sir, you’ve got to come in and talk to me a second.” I said, “Well, you’re too busy.” He said, “No, no.” He says, “We’ve made the decision we’re going to war with Iraq.” This was on or about the 20th of September. I said, “We’re going to war with Iraq? Why?” He said, “I don’t know.” He said, “I guess they don’t know what else to do.” So I said, “Well, did they find some information connecting Saddam to al-Qaeda?” He said, “No, no.” He says, “There’s nothing new that way. They just made the decision to go to war with Iraq.” He said, “I guess it’s like we don’t know what to do about terrorists, but we’ve got a good military and we can take down governments.” And he said, “I guess if the only tool you have is a hammer, every problem has to look like a nail.

So I came back to see him a few weeks later, and by that time we were bombing in Afghanistan. I said, “Are we still going to war with Iraq?” And he said, “Oh, it’s worse

¹⁵<https://genius.com/General-wesley-clark-seven-countries-in-five-years-annotated>



Figure 3.17: **General Wesley Clark**

than that.” He reached over on his desk. He picked up a piece of paper. And he said, “I just got this down from upstairs” - meaning the Secretary of Defense’s office - “today.” And he said, “This is a memo that describes how we’re going to take out seven countries in five years, starting with Iraq, and then Syria, Lebanon, Libya, Somalia, Sudan and, finishing off, Iran.” I said, “Is it classified?” He said, “Yes, sir.” I said, “Well, don’t show it to me.” And I saw him a year or so ago, and I said, “You remember that?” He said, “Sir, I didn’t show you that memo! I didn’t show it to you!”

The global trade in light arms

An important poverty-generating factor in the developing countries is war - often civil war. The five permanent members of the U.N. Security Council are, ironically, the five largest exporters of small arms. Small arms have a long life. The weapons poured into Africa by both sides during the Cold War are still there, and they contribute to political chaos and civil wars that block development and cause enormous human suffering.

The United Nations website on Peace and Security through Disarmament states that “Small arms and light weapons destabilize regions; spark, fuel and prolong conflicts; obstruct relief programmes; undermine peace initiatives; exacerbate human rights abuses; hamper development; and foster a ‘culture of violence’.”

An estimated 639 million small arms and light weapons are in circulation worldwide,

one for every ten people. Approximately 300,000 people are killed every year by these weapons, many of them women and children.

Examples of endemic conflict

In several regions of Africa, long-lasting conflicts have prevented development and caused enormous human misery. These regions include Ethiopia, Eritria, Somalia (Darfur), Chad, Zimbabwe and the Democratic Republic of Congo. In the Congo, the death toll reached 5.4 million in 2008, with most of the victims dying of disease and starvation, but with war as the root cause. In view of these statistics, the international community can be seen to have a strong responsibility to stop supplying small arms and ammunition to regions of conflict. There is absolutely no excuse for the large-scale manufacture and international sale of small arms that exists today.

The Wolfowitz Doctrine

The Wolfowitz Doctrine is the unofficial name given to the early version of the Defense Strategy for the 1990s: The Regional Defense Strategy report for the 1994-99 fiscal years. It was later released by then Secretary of Defense Dick Cheney in 1993. It brazenly advocates that America do everything in its power to retain its global hegemony and superpower status, including ensuring that Russia, China, Iran and other regional powers - but especially Russia - be prevented from attaining enough power to seriously challenge the US. In short, it's another US blueprint for total global supremacy.

There are many quotable passages from the Wolfowitz Doctrine. Here's one which sums up its aims:

"Our first objective is to prevent the re-emergence of a new rival, either on the territory of the former Soviet Union or elsewhere that poses a threat on the order of that posed formerly by the Soviet Union. This is a dominant consideration underlying the new regional defense strategy and requires that we endeavor to prevent any hostile power from dominating a region whose resources would, under consolidated control, be sufficient to generate global power. These regions include Western Europe, East Asia, the territory of the former Soviet Union, and Southwest Asia."

Similar motives guide US policy today. In February, 2018, US Secretary of Defense James Mattis said: "We will continue to prosecute the campaign against terrorists, but great-power competition - not terrorism - is now the primary focus of US national security."

Militarism in North Korea

The following states are now believed to currently possess nuclear weapons: The United states, Russia, The United Kingdom, France, China, India, Pakistan, North Korea and Israel. The way in which North Korea obtained its nuclear weapons is described by Wikipedia in the following paragraphs:

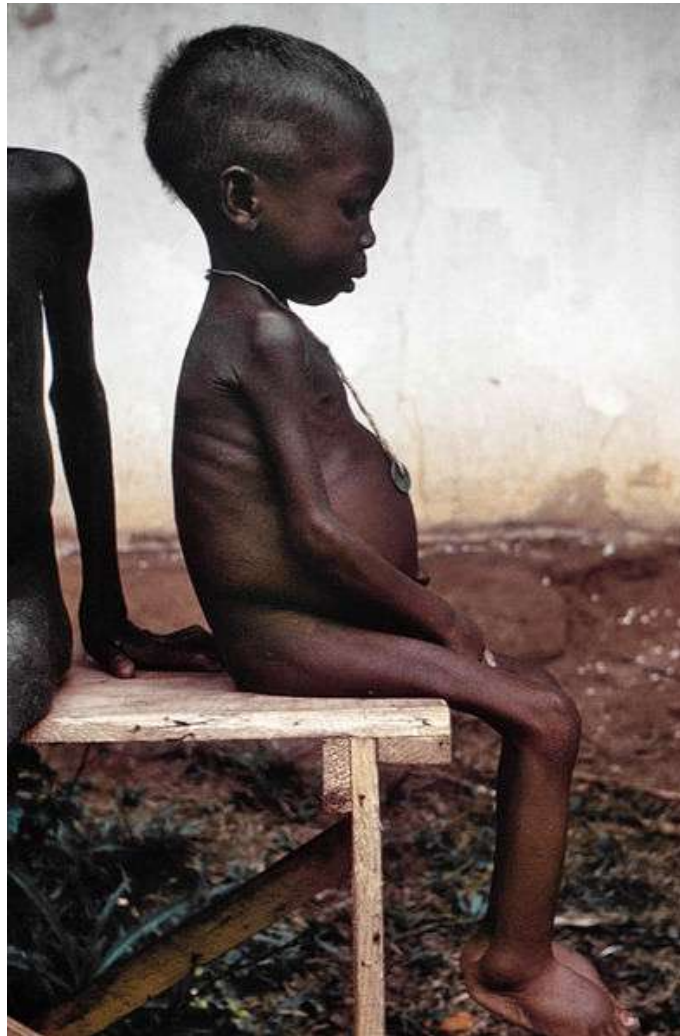


Figure 3.18: 40,000 children die each day from starvation or from poverty-related diseases. Meanwhile, the world spends more than \$1,700,000,000,000 each year on armaments.

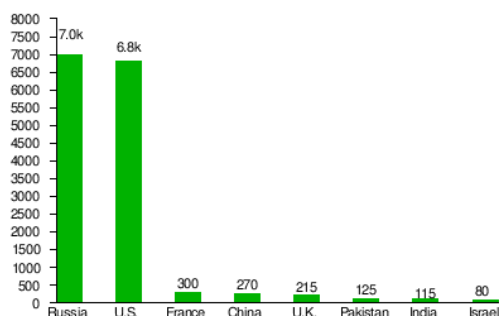


Figure 3.19: **Countries by estimated nuclear warhead stockpiles according to the Federation of American scientists.**

“The nuclear program can be traced back to about 1962, when North Korea committed itself to what it called ‘all-fortressization’, which was the beginning of the hyper-militarized North Korea of today. In 1963, North Korea asked the Soviet Union for help in developing nuclear weapons, but was refused. The Soviet Union agreed to help North Korea develop a peaceful nuclear energy program, including the training of nuclear scientists. Later, China, after its nuclear tests, similarly rejected North Korean requests for help with developing nuclear weapons.

“Soviet engineers took part in the construction of the Yongbyon Nuclear Scientific Research Center and began construction of an IRT-2000 research reactor in 1963, which became operational in 1965 and was upgraded to 8 MW in 1974. In 1979 North Korea indigenously began to build in Yongbyon a second research reactor, an ore processing plant and a fuel rod fabrication plant. Soviet engineers took part in the construction of the Yongbyon Nuclear Scientific Research Center, and began construction of an IRT-2000 research reactor in 1963, which became operational in 1965 and was upgraded to 8 MW in 1974. In 1979 North Korea indigenously began to build in Yongbyon a second research reactor, an ore processing plant and a fuel rod fabrication plant. ”

Thus like other new nuclear weapons states, North Korea obtained nuclear weapons by misuse of nuclear power generation facilities donated by other countries. In addition, North Korea spend a large fraction of its GDP on conventional armaments. Under the Songun policy, the Korean Peoples Army is the central institution of North Korean society. As of 2016, the Korean Peoples Army had 5,889,000 paramilitary personelle (25% of the population of North Korea) making it the largest paramilitary organization on earth.

Table 3.1: **SIPRI Military Expenditure Database, 2016**

Rank	Country	Annual Spending \$ Bn.	% of GDP
1	United State	611.2	3.3
2	China	215.7	1.9
3	Russia	69.2	5.3
4	Saudi Arabia	63.7	10
5	India	55.9	2.5
6	France	55.7	2.3
7	United Kingdom	48.3	1.9
8	Japan	46.1	1.0
9	Germany	41.1	1.2
10	South Korea	36.8	2.7
11	Italy	27.9	1.5
12	Australia	24.3	2.0

Table 3.2: **SIPRI List of arms manufacturers, 2016**

Rank	Company	Country	Annual Arms Sales \$ Mn.
1	Lockheed Martin	United States	40,830
2	Boeing	United States	29,510
3	Raytheon	United States	22,910
4	BAE Systems	United Kingdom	22,700
5	Northrop Grumman	United States	21,400
6	General Dynamics	United States	19,230
7	Airbus	European Union	12,520
8	L-3 Communications	United States	8,890
9	Leonardo-Finmeccanica	Italy	8,500
10	Thales Group	France	8,170
11	United Technologies Corporation	United States	6,870
12	Huntington Ingalls Industries	United States	6,720



Figure 3.20: North Korea's dictator, Kim Jong-un. The doctrine of nuclear deterrence rests on the assumption that political leaders will always act rationally, an assumption that seems very uncertain in the case of the U.S.-North Korean conflict.

The SIPRI Yearbook, 2017

Dan Smith of the Stockholm International Peace Research Institute (SIPRI) wrote the following Introduction to the organization's yearbook for 2017:

"An overall perspective on 2016 finds a balance between negative developments and the continued functioning of the international system. However, the year ended with clear grounds for concern that the balance sheet seemed to be tipping towards the negative amid growing unease about the durability of key parts of the international security architecture.

"Conflicts in the Middle East continued to generate humanitarian tragedies and large-scale movement of refugees, and violent conflict continued in several other parts of the world, most notably Africa, Asia and to a lesser extent Eastern Europe. Developments in North Korea's nuclear programme contributed to international political instability with potentially serious knock-on effects. On the positive side, the 2015 Paris Climate Agreement entered into force in November 2016, the 2015 Iran nuclear deal began implementation on time in early 2016 and the United Nations General Assembly adopted a resolution to start negotiations in 2017 on eliminating nuclear weapons. Progress was also made on work to monitor the unfolding implementation of the UN's Agenda 2030 for international social and economic development. A major contribution to the positive side of the balance sheet in 2016 was the peace agreement in Colombia.

"Nonetheless, virtually all the major global indicators for peace and security have moved in a negative direction: more military spending, increased arms trading, more violent conflicts and the continuing forward march of military technology.

"Existing multilateral and bilateral arms control agreements and processes are also under challenge-not least due to the deteriorating relationship between Russia and the United States-raising questions of global concern and potentially epochal scope. Were the great gains in peaceful relations since the end of the cold war now being reversed? Would the return of strategic competition between the major powers have negative implications for managing increased conflict risk? These uncertainties, combined with political developments in Europe and the USA- especially the vote by the United Kingdom to leave the European Union and the election of Donald J. Trump as US President-seemed to reveal

a much decreased commitment to international institutions and a renewed emphasis in several key states on a narrowly defined national interest.

“The scale of the challenges facing humanity has been summed up in the proposal to adopt the label of ‘the Anthropocene’ for the current era, thus designating it as one in which human activity is the dominant influence on climate and the environment. It is disconcerting to note that such cooperation risks becoming more elusive than it has seemed for most of the time since the end of the cold war, at a time when it is more needed than ever. Experience has shown that international cooperation can work. But is the international cooperative urge as persistent as the problems it needs to address?”

3.11 A culture of violence

Links with the entertainment industry

Here are a few films that glorify war:

- Black Hawk Down
- Top Gun
- Behind Enemy Lines
- Red Dawn (1984)
- American Sniper
- Iron Eagle
- Pearl Harbor
- Act of Valor
- We Were Soldiers
- The Green Berets

Making a game of killing

The mass media are an important part of our educational system. Perhaps it is time to look more closely at the values that they are transmitting. In particular, we should perhaps look at computer games designed for young boys. They often give the strongest imaginable support to a culture of violence.

For example, a game entitled “Full Spectrum Warrior” was recently reviewed in a Danish newspaper. According to the reviewer, “...An almost perfect combination of graphics, sound, band design, and gameplay makes it seem exactly like the film Black Hawk Down - with the player as the main character. This is not just a coincidence, because the game is based on an army training program... Full Spectrum Warrior is an extremely intense experience, and despite the advanced possibilities, the controls are simple enough so that young children can play it... The player is completely drawn into the screen, and remains there until the end of the mission.” The reviewer gave the game six stars (the maximum).



Figure 3.21: Tom Cruise in “Top Gun”.



Figure 3.22: A culture of violence supports the Devil’s Dynamo.

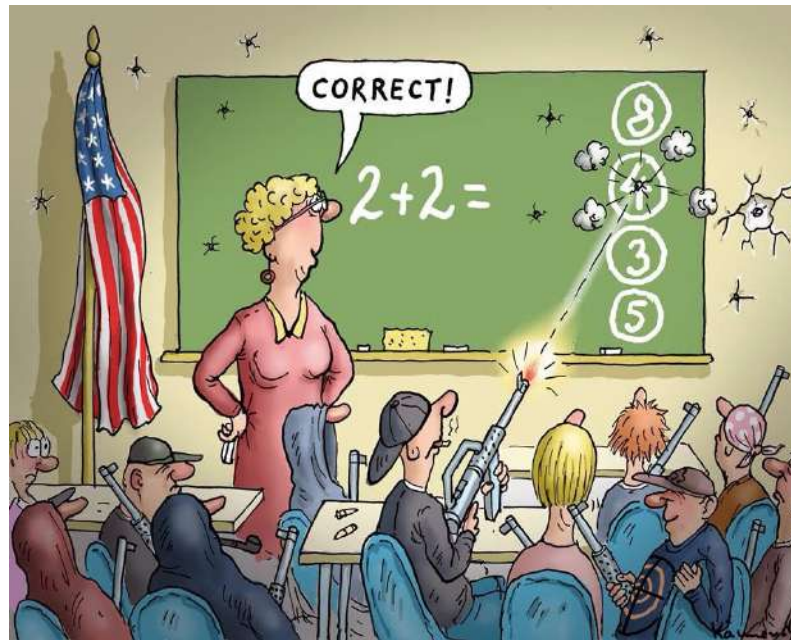


Figure 3.23: **A culture of violence:** In the United States the National Rifle Association has proposed guns in schools as the answer to the epidemic of school shootings.

Another genre of computer games has to do with building empires, ignoring the fact that imperialism is morally indefensible. For example, “Forge of Empires” is a browser-based strategy game. It is described as follows: “The game offers a single-player campaign for players to explore and conquer several provinces, gaining resources and new technology as they progress.” Conquering countries for the sake of gaining their resources is an all-too-familiar feature of the modern world. In the game “Forge of Empires”, our young people are indoctrinated with the ethos of resource wars.

During his trial, the Norwegian mass-murderer Anders Behring Breivik described how he trained for his attack on young people on the Island of Utøya using the computer game “Call of Duty: Modern Warfare”. The court also heard how he took what he called a “sabbatical” for a year between the summers of 2006 and 2007. During this year, he played a game called “World of Warcraft” full-time, in the bedroom of his mother’s Oslo flat, spending up to 16 hours a day using the game to distance himself from the human and moral significance of killing.

Is this not similar to the frame of mind of drone operators, sitting in comfort in their Nevada bunkers, distanced from the reality of killing? They are playing a computer game that kills targeted individuals and their families, in remote countries, by remote control. There is no need to look into the eyes of the victims. They are just abstract symbols in a computer game.

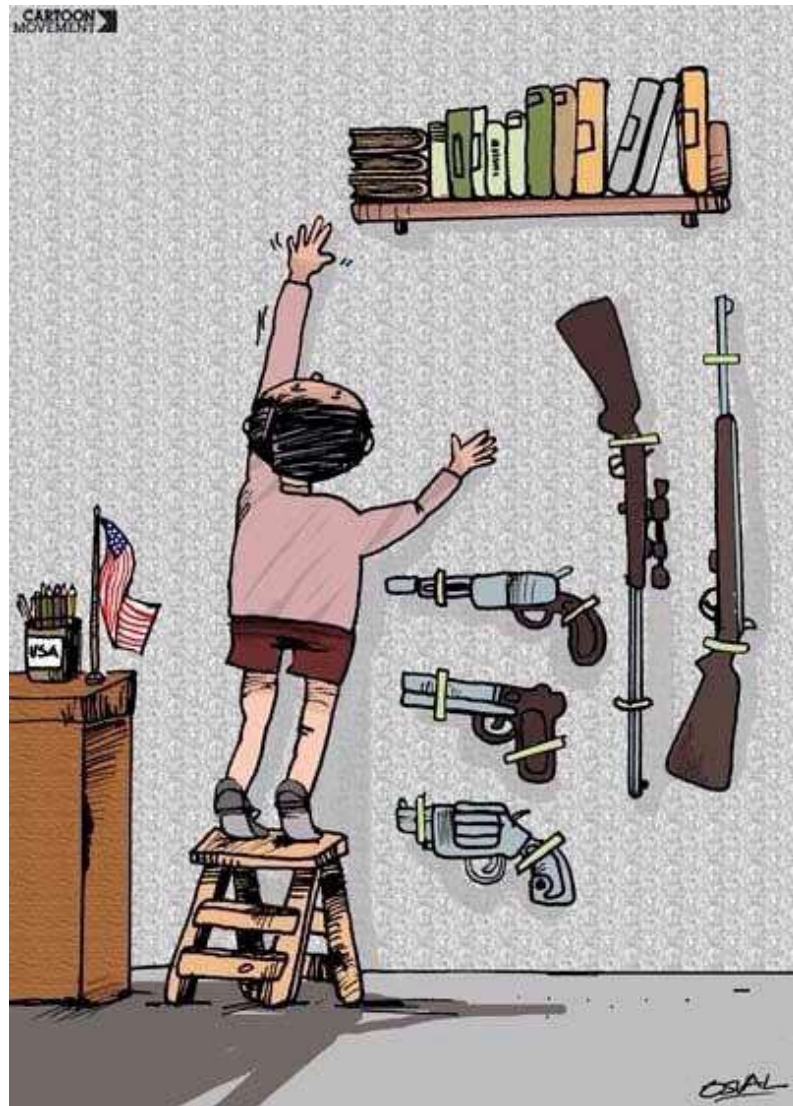


Figure 3.24: A culture of violence. Guns in schools?

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Chapter 4

DEMOCRACY OR OLIGARCHY?

4.1 Benefits of equality

The Industrial Revolution opened up an enormous gap in military strength between the industrialized nations and the rest of the world. Taking advantage of their superior weaponry, Europe, the United States and Japan rapidly carved up the remainder of the world into colonies, which acted as sources of raw materials and food, and as markets for manufactured goods. Between 1800 and 1914, the percentage of the earth under the domination of colonial powers increased to 85 percent, if former colonies are included.

The English economist and Fabian, John Atkinson Hobson (1858-1940), offered a famous explanation of the colonial era in his book “Imperialism: A Study” (1902). According to Hobson, the basic problem that led to colonial expansion was an excessively unequal distribution of incomes in the industrialized countries. The result of this unequal distribution was that neither the rich nor the poor could buy back the total output of their society. The incomes of the poor were insufficient, and rich were too few in number. The rich had finite needs, and tended to reinvest their money. As Hobson pointed out, reinvestment in new factories only made the situation worse by increasing output.

Hobson had been sent as a reporter by the Manchester Guardian to cover the Second Boer War. His experiences had convinced him that colonial wars have an economic motive. Such wars are fought, he believed, to facilitate investment of the excess money of the rich in African or Asian plantations and mines, and to make possible the overseas sale of excess manufactured goods. Hobson believed imperialism to be immoral, since it entails suffering both among colonial peoples and among the poor of the industrial nations. The cure that he recommended was a more equal distribution of incomes in the manufacturing countries.

Interestingly, TED Talks (ideas worth spreading) was recently under fire from many progressive groups for censoring a short talk by the adventure capitalist, Nick Hanauer, entitled “Income Inequality”. In this talk, Hanauer said exactly the same thing as John Hobson, but he applies the ideas, not to colonialism, but to current unemployment in the United States. Hanauer said that the rich are unable to consume the products of society because they are too few in number. To make an economy work, demand must be increased,



Figure 4.1: **World wealth levels in 2004.** Countries with per capita wealth greater than 100,000 USD are shown in red, while those with per capita wealth less than 5,000 USD are shown in blue.

and for this to happen, the distribution of incomes must become much more equal than it is today in the United States.

TED has now posted Hanauer’s talk, and the interested reader can find another wonderful TED talk dealing with the same issues from the standpoint of health and social problems. In a splendid lecture entitled “How economic inequality harms societies”, Richard Wilkinson demonstrates that there is almost no correlation between gross national product and a number of indicators of the quality of life, such as physical health, mental health, drug abuse, education, imprisonment, obesity, social mobility, trust, violence, teenage pregnancies and child well-being. On the other hand he offers comprehensive statistical evidence that these indicators are strongly correlated with the degree of inequality within countries, the outcomes being uniformly much better in nations where income is more equally distributed.

Warren Buffet famously remarked, “There’s class warfare, all right. But it’s my class, the rich class, that’s making war, and we’re winning.” However, the evidence presented by Hobson, Hanauer and Wilkinson shows conclusively that no one wins in a society where inequality is too great, and everyone wins when incomes are more evenly distributed.



Figure 4.2: Children live by scavaging from garbage dumps.



Figure 4.3: Even in the United States, one of the world's richest countries,, many millions of people live in poverty,

4.2 Extreme inequality today

Here are some quotations from a report by the Global Inequality organization: ¹

Inequality has been on the rise across the globe for several decades. Some countries have reduced the numbers of people living in extreme poverty. But economic gaps have continued to grow as the very richest amass unprecedented levels of wealth. Among industrial nations, the United States is by far the most top-heavy, with much greater shares of national wealth and income going to the richest 1 percent than any other country.

The world's richest 1 percent, those with more than \$1 million, own 45 percent of the world's wealth. Adults with less than \$10,000 in wealth make up 64 percent of the world's population but hold less than 2 percent of global wealth. The world's wealthiest individuals, those owning over \$100,000 in assets, total less than 10 percent of the global population but own 84 percent of global wealth. Credit Suisse defines "wealth" as the value of a household's financial assets plus real assets (principally housing), minus their debts.

"Ultra high net worth individuals" - the wealth management industry's term for people worth more than \$30 million - hold an astoundingly disproportionate share of global wealth. These wealth owners hold 11.3 percent of total global wealth, yet represent only a tiny fraction (0.003%) of the world population.

The world's 10 richest billionaires, according to Forbes, own \$745 billion in combined wealth, a sum greater than the total goods and services most nations produce on an annual basis. The globe is home to 2,208 billionaires, according to the 2018 Forbes ranking.

Those with extreme wealth have often accumulated their fortunes on the backs of people around the world who work for poor wages and under dangerous conditions. According to Oxfam, the wealth divide between the global billionaires and the bottom half of humanity is steadily growing. Between 2009 and 2017, the number of billionaires it took to equal the wealth of the world's poorest 50 percent fell from 380 to 42...

The United States has more wealth than any other nation. But America's top-heavy distribution of wealth leaves typical American adults with far less wealth than their counterparts in other industrial nations.

4.3 Restoring Democracy in the United States

The Occupy Wall Street movement's slogan, "We are the 99 percent", points to the fact that a very small power elite, perhaps only 1 percent of the population, has a hugely disproportionate amount of economic and political power in the United States. In this sense, the United States is no longer a democracy, since neither the economic system nor

¹<https://inequality.org/facts/global-inequality/>

the government serve the will and needs of the people. They serve instead the interests of the wealthy and powerful 1 percent, who control not only the mass media and the financial system, but also the politicians of both major parties. The situation in many other countries is very similar.

But as Occupy Wall Street tells us, this need not be so. After all we, the ordinary people, who long for reform, are an overwhelming majority. We are the 99 percent, and if we choose to exert ourselves, we have the power to change the system. The problem is that, having voted, we tend to lapse into several years of political inactivity, convinced that we are powerless. But nothing could be more false than our sense of powerlessness, and nothing could be more dangerous to true democracy. Voting is only a small part of our duty. We must also maintain constant political activity to ensure that those whom we have placed in office actually serve the will and the needs of the people. This means creating our own media, if the mass media are slaves to the power elite. It means constant activity, meetings, demonstrations, exhibitions, videos produced for U-tube, and whatever other means we can invent to constantly hold before the public and the government a vision of what is right.

When President Obama was elected for a second term, the majority of the world's peoples heaved a huge sigh of relief. Disaster had been avoided. But the newly re-elected President is faced with a House of Representatives controlled by the Republicans, and with a Senate which hardly differs from the House on most issues. Both the House and the Senate are powerfully influenced by lobbies, representing, for example, the interests of Wall Street, the fossil fuel industry and the military-industrial complex. Therefore they take no action to regulate the banks, or to cut grossly bloated military budgets, or to address the vital issue of climate change. Instead they plan to cut social services for a population that already is in great distress.

4.4 Europe needs to be independent

Legacies from the First and Second World Wars and the Cold War

In both World War I and World War II, participation by the United States brought victory to the Allies. In the years that followed 1945, the Marshall Plan helped Europe to recover. During the Cold War period that followed, many people in Europe saw NATO, and a close alliance with the United States, as means for preventing a takeover by the Soviet Union.

However, whatever debt of gratitude Europe may owe to the United States for its past help, we must now ask whether the time has not now arrived for Europe to be independent. Just as the US once declared it is independence from England, Europe must now declare its independence from the United States.

The loss of democracy in the United States

Recent revelations by Edward Snowden, Wikileaks and other whistle-blowers have made it clear that the United States has suffered a decay of its political institutions. The US can hardly be called a democracy today, since it seems to be ruled by an extremely wealthy oligarchy rather than by its people. In fact, the people of the US do not really know what their government is doing because the activities of the CIA, the NSA, Secret Service, Homeland Security the FBI, and many other agencies are masked in secrecy. A country where the people do not know what their government is doing, and where the people have no control over their government's actions, cannot be said to be a democracy.

The history of this huge secret side of the US government goes back to the Cold War period, during which both sides engaged in both covert and military interference with the internal affairs of smaller countries. The Soviet Union and China also intervened in the internal affairs of many countries, for example in Korea in 1950-53, Hungary in 1956, Czechoslovakia in 1968, and so on; very long list.

Meanwhile the US interfered, militarily or covertly, in the internal affairs of a large number of nations: China, 1945-49; Italy, 1947-48; Greece, 1947-49; Philippines, 1946-53; South Korea, 1945-53; Albania, 1949-53; Germany, 1950s; Iran, 1953; Guatemala, 1953-1990s; Middle East, 1956-58; Indonesia, 1957-58; British Guiana/Guyana, 1953-64; Vietnam, 1950-73; Cambodia, 1955-73; The Congo/Zaire, 1960-65; Brazil, 1961-64; Dominican Republic, 1963-66; Cuba, 1959-present; Indonesia, 1965; Chile, 1964-73; Greece, 1964-74; East Timor, 1975-present; Nicaragua, 1978-89; Grenada, 1979-84; Libya, 1981-89; Panama, 1989; Iraq, 1990-present; Afghanistan 1979-92; El Salvador, 1980-92; Haiti, 1987-94; Yugoslavia, 1999; and Afghanistan, 2001-present, Syria, 2013-present. Egypt, 2013-present, Venezuela, 2013-present. None of these interventions, from either side, can be justified, since people have a right to live under governments of their own choosing, regardless of whether those governments are optimal.²

With the fall of the Soviet Union, intoxication with the idea of the United States as the sole superpower expressed itself in the form of contempt for international law and the United Nations, and especially in the declarations of the "Project for a New American Century", which many people have compared to Hitler's "Mein Kampf".

NATO

Former UN Assistant Secretary General Hans Christof von Sponeck used the following words to express his opinion that NATO now violates the UN Charter and international law: "In the 1949 North Atlantic Treaty, the Charter of the United Nations was declared to be NATO's legally binding framework. However, the United-Nations monopoly of the use of force, especially as specified in Article 51 of the Charter, was no longer accepted according to the 1999 NATO doctrine. NATO's territorial scope, until then limited to the Euro-Atlantic region, was expanded by its members to include the whole world"

² <http://www.informationclearinghouse.info/article3249.htm>
<http://www.informationclearinghouse.info/article29129.htm>

One might say that in recent years, participation in NATO has made European countries accomplices in US efforts to achieve global hegemony by means of military force, in violation of the UN Charter and international law.

Article 2 of the UN Charter requires that “All members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state.” This requirement is somewhat qualified by Article 51, which says that “Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security.”

Thus, in general, war is illegal under the UN Charter. Self-defense against an armed attack is permitted, but only for a limited time, until the Security Council has had time to act. The United Nations Charter does not permit the threat or use of force in preemptive wars, or to produce regime changes, or for so-called “democratization”, or for the domination of regions that are rich in oil. NATO must not be a party to the threat or use of force for such illegal purposes, but instead must support the authority of the United Nations Charter, and the fundamental authority of international law.

US tactical nuclear weapons in Europe

At present, NATO’s nuclear weapons policies violate both the spirit and the text of the Nuclear Nonproliferation Treaty in several respects: Today there are an estimated 200 US nuclear weapons still in Europe. The air forces of the nations in which they are based are regularly trained to deliver the US weapons. This “nuclear sharing”, as it is called, violates Articles I and II of the NPT, which forbid the transfer of nuclear weapons to non-nuclear-weapon states. It has been argued that the NPT would no longer be in force if a crisis arose, but there is nothing in the NPT saying that the treaty would not hold under all circumstances.

Article VI of the NPT requires states possessing nuclear weapon to get rid of them within a reasonable period of time. This article is violated by fact that NATO policy is guided by a Strategic Concept, which visualizes the continued use of nuclear weapons in the foreseeable future.

The principle of no-first-use of nuclear weapons has been an extremely important safeguard over the years, but it is violated by present NATO policy, which permits the first-use of nuclear weapons in a wide variety of circumstances.

NSA spying on European leaders

The massive illegal collection of private data by the National Security Agency has produced worldwide anger. The targeting of European leaders has included the famous bugging of Angela Merkel’s cellphone.

In the words of former Assistant Secretary of the Treasury Paul Craig Roberts, “Obama’s US Trade Representative, who has been negotiating secret trade agreements in Europe and

Asia that give US corporations immunity to the laws of all countries that sign the agreements, has threatened WTO penalties if Europe's communications network excludes the US companies that serve as spies for NSA. Washington in all its arrogance has told its most necessary allies that if you don't let us spy on you, we will use WTO to penalize you."

What will the future bring?

For many years, the US dollar has acted as a global currency. However, we can already see moves away from the "petrodollar". When China, India, Russia, Iran and Brazil begin non-dollar trading, the value of the dollar will fall drastically, and US political and economic power will fall with it. This is just one more reason why European independence is desirable. But the most important reasons why we should wish for European independence are ethical ones: Europe must not be the close ally (or puppet?) of the world's greatest purveyor of violence and war.

Must Europe really be dragged into a potentially catastrophic war with Russia?

At present the United States government is trying to force the European members of NATO to participate in aggressive operations in connection with the coup which it carried out in Ukraine. Europe must refuse³

The hubris, and reckless irresponsibility of the US government in risking a catastrophic war with Russia is almost beyond belief, but the intervention in Ukraine is only one in a long series of US interventions:

During the period from 1945 to the present, the US interfered, militarily or covertly, in the internal affairs of a large number of nations: China, 1945-49; Italy, 1947-48; Greece, 1947-49; Philippines, 1946-53; South Korea, 1945-53; Albania, 1949-53; Germany, 1950s; Iran, 1953; Guatemala, 1953-1990s; Middle East, 1956-58; Indonesia, 1957-58; British Guiana, 1953-64; Vietnam, 1950-73; Cambodia, 1955-73; The Congo/Zaire, 1960-65; Brazil, 1961-64; Dominican Republic, 1963-66; Cuba, 1959-present; Indonesia, 1965; Chile, 1964-73; Greece, 1964-74; East Timor, 1975-present; Nicaragua, 1978-89; Grenada, 1979-84; Libya, 1981-89; Panama, 1989; Iraq, 1990-present; Afghanistan 1979-92; El Salvador, 1980-92; Haiti, 1987-94; Yugoslavia, 1999; and Afghanistan, 2001-present, Syria, 2013-present. Egypt, 2013-present.

Most of these interventions were explained to the American people as being necessary to combat communism (or more recently, terrorism), but an underlying motive was undoubtedly the desire of the ruling oligarchy to put in place governments and laws that would be favorable to the economic interests of the US and its allies. Also, the military-industrial complex needs justification for the incredibly bloated military budgets that drain

³<https://www.transcend.org/tms/2014/04/natos-aggression-against-russia-and-the-danger-of-war-in-europe/>

desperately needed resources from social and environmental projects.

Do the people of Europe really want to participate in the madness of aggression against Russia? Of course not! What about European leaders? Why don't they follow the will of the people and free Europe from bondage to the United States? Have our leaders been bribed? Or have they been blackmailed through personal secrets, discovered by the long arm of NSA spying?

4.5 Secrecy and democracy are incompatible

It is obvious, almost by definition, that excessive governmental secrecy and true democracy are incompatible. If the people of a country have no idea what their government is doing, they cannot possibly have the influence on decisions that the word "democracy" implies.

Dark government

Governmental secrecy is not something new. Secret diplomacy contributed to the outbreak of World War I, and the secret Sykes-Picot agreement later contributed to the bitterness of conflicts in the Middle East. However, in recent years, governmental secrecy has grown enormously.

The revelations of Edward Snowden and others have shown that the number of people involved in secret operations of the United States government is now as large as the entire population of Norway: roughly 5 million. The influence of this dark side of government has become so great that no president is able to resist it.

In a recent article, John Chuckman remarked that "The CIA is now so firmly entrenched and so immensely well financed (much of it off the books, including everything from secret budget items to the peddling of drugs and weapons) that it is all but impossible for a president to oppose it the way Kennedy did. Obama, who has proved himself to be a fairly weak character from the start, certainly has given the CIA anything it wants. The dirty business of ISIS in Syria and Iraq is one project. The coup in Ukraine is another. The pushing of NATO's face right against Russia's borders is another. Several attempted coups in Venezuela are still more. And the creation of a drone air force for extra-judicial killings in half a dozen countries is yet another. They don't resemble projects we would expect from a smiley-faced intelligent man who sometimes wore sandals and refused to wear a flag pin on his lapel during his first election campaign."⁴

Of course the United States government is by no means alone in practicing excessive secrecy: Scott Horton recently wrote an article entitled *How to Rein in a Secretive Shadow Government Is Our National Security Crisis*. He dedicated the article to the Soviet dissident Andrei Sakharov because, as he said, "Sakharov recognized that the Soviet Union rested on a colossal false premise: it was not so much socialism (though Sakharov was certainly a critic of socialism) as it was the obsession with secrecy, which obstructed the search

⁴ <http://www.informationclearinghouse.info/article41222.htm>

for truth, avoided the exposure of mistakes, and led to the rise of powerful bureaucratic elites who were at once incompetent and prone to violence.”⁵

Censorship of the news

Many modern governments have become very expert in manipulating public opinion through mass media. They only allow the public to hear a version of the “news” that has been handed down by powerholders. Of course, people can turn to the alternative media that are available on the Internet. But on the whole, the vision of the world presented on television screens and in major newspapers is the “truth” that is accepted by the majority of the public, and it is this picture of events that influences political decisions. Censorship of the news by the power elite is a form of secrecy, since it withholds information that is needed for a democracy to function properly.

Coups, torture and illegal killing

During the period from 1945 to the present, the US interfered, militarily or covertly, in the internal affairs of at least 38 nations. Most of these interventions were explained to the American people as being necessary to combat communism (or more recently, terrorism), but an underlying motive was undoubtedly the desire to put in place governments and laws that would be favorable to the economic interests of the US and its allies.

For the sake of balance, we should remember that during the Cold War period, the Soviet Union and China also intervened in the internal affairs of many countries. These Cold War interventions were also unjustifiable. Nothing can justify military or covert interference by superpowers in the internal affairs of smaller countries, since people have a right to live under governments of their own choosing even if those governments are not optimal.

Many people in Latin America and elsewhere have been tortured: The long history of CIA torture was recently investigated, but only small portions of the 6000-page report are available to the public. The rest remains secret.⁶ Extrajudicial killing of civilians by means of drones is also shrouded by secrecy, and it too is a gross violation of democratic principles.⁷

Secret trade deals

The Trans-Pacific Partnership is one of the trade deals that is being negotiated in secret. Not even the US congress is allowed to know the details of the document. However, enough information has been leaked to make it clear that if the agreement is passed, foreign

⁵ <http://truth-out.org/progressivepicks/item/29636-scott-horton-how-to-rein-in-a-secretive-shadow-government-is-our-national-security-crisis>

⁶ <https://www.transcend.org/tms/2015/03/the-cia-in-latin-america-from-coups-to-torture-and-preemptive-killings/>

⁷ <http://www.globalresearch.ca/lawless-drone-killings/5355535>

corporations would be allowed to “sue” the US government for loss of profits because of (for example) environmental regulations. The “trial” would be outside the legal system, before a tribunal of lawyers representing the corporations.⁸

A similar secret trade deal with Europe, the Trans-Atlantic Trade and Investment Partnership (TTIP), is also being “fast-tracked”. One can hardly imagine greater violations of democratic principles.

Secret land purchases in Africa

According to a report released by the Oakland Institute, in 2009 alone, hedge funds bought or leased nearly 60 million hectares of land in Africa, an area the size of France.⁹

As populations increase, and as water becomes scarce, China, and other countries, such as Saudi Arabia are also buying enormous tracts of agricultural land, not only in Africa, but also in other countries.¹⁰ These land purchases are very often kept secret from the local populations by corrupt governments.

Secrecy, democracy and nuclear weapons

Nuclear weapons were developed in secret. The decision to use them on the civilian populations of Hiroshima and Nagasaki in an already-defeated Japan was made in secret. Since 1945, secrecy has surrounded all aspects of nuclear weapons, and for this reason it is clear that they are essentially undemocratic.

Nuclear disarmament has been one of the core aspirations of the international community since the first use of nuclear weapons in 1945. A nuclear war, even a limited one, would have global humanitarian and environmental consequences, and thus it is a responsibility of all governments, including those of non-nuclear countries, to protect their citizens and engage in processes leading to a world without nuclear weapons.

Now a new process has been established by the United Nations General Assembly, an Open Ended Working Group (OEWG) to Take Forward Multilateral Nuclear Disarmament Negotiations. The OEWG convened at the UN offices in Geneva on May 14, 2013. Among the topics discussed was a Model Nuclear Weapons Convention.

The Model Nuclear Weapons Convention prohibits development, testing, production, stockpiling, transfer, use and threat of use of nuclear weapons. States possessing nuclear weapons will be required to destroy their arsenals according to a series of phases. The Convention also prohibits the production of weapons usable fissile material and requires delivery vehicles to be destroyed or converted to make them non-nuclear capable.

⁸ <http://www.citizen.org/Page.aspx?pid=5411>
<https://www.transcend.org/tms/2015/03/world-at-a-crossroads-stop-the-fast-track-to-a-future-of-global-corporate-rule/>

⁹ <http://www.bbc.com/news/world-africa-13688683>

¹⁰ <http://www.latimes.com/world/asia/la-fg-china-foreign-farmland-20140329-story.html>

Verification will include declarations and reports from States, routine inspections, challenge inspections, on-site sensors, satellite photography, radionuclide sampling and other remote sensors, information sharing with other organizations, and citizen reporting. Persons reporting suspected violations of the convention will be provided protection through the Convention including the right of asylum.

Thus we can see that the protection of whistleblowers is an integral feature of the Model Nuclear Weapons Convention now being discussed. As Sir Joseph Rotblat (1908-2005, Nobel Laureate 1995) frequently emphasized in his speeches, societal verification must be an integral part of the process of “going to zero” (i.e, the total elimination of nuclear weapons). This is because nuclear weapons are small enough to be easily hidden. How will we know whether a nation has destroyed all of its nuclear arsenal? We have to depend on information from insiders, whose loyalty to the whole of humanity prompts them to become whistleblowers. And for this to be possible, they need to be protected.

In general, if the world is ever to be free from the threat of complete destruction by modern weapons, we will need a new global ethic, an ethic as advanced as our technology. Of course we can continue to be loyal to our families, our localities and our countries. But this must be supplemented by a higher loyalty: a loyalty to humanity as a whole.

Freedom from fear

In order to justify secrecy, enormous dark branches of government and mass illegal spying, governments say: “We are protecting you from terrorism”. But terrorism is not a real threat, since our chances of dying from a terrorist attack are vanishingly small compared to (for example) preventable disease or an automobile accident. If we are ever to reclaim our democracy, we must free ourselves from fear.

4.6 Democracy and freedom of information

The Icelandic parliamentarian, Birgitta Jonsdottir, has taken an important step towards solving one of the central problems that the world is facing today. The problem is this: How can we regain democratic government when the mainstream media are completely controlled the corporate oligarchy?

If anyone doubts that democratic government has been lost and needs to be regained, let them think of the recent US election, in which a large percentage of the voters stayed home because they were disillusioned with the political process. They knew that whomever they elected, their voices would not be heard.

The voters did not like to be told that they had power, which in fact they did not have. Both major political parties follow the dictates of the corporate oligarchs, rather than the will of the people. No doubt the Democrats in the US Congress are slightly better than the Republicans, but both parties have essentially been bought by big money from lobbies representing the military-industrial complex, the fossil fuel companies, and Israel.

Contrary to the wishes of the people, social services continue to be cut in favor of obscenely bloated military budgets, perpetual foreign wars, and environment-destroying subsidization of the fossil fuel industry. Despite the will of the people, the US government exposes our beautiful earth to the deadly risks of all-destroying thermonuclear war and out-of-control global warming.

The United States is by no means the only country with an oligarchic non-democratic government. Globally, countries with truly democratic and sane governments are the exception rather than the rule. Therefore the problem is a global one, and let us repeat it: How can we regain democratic government when the mainstream media are completely controlled the corporate oligarchy?

Let us return to Birgitta Jonsdottir. Who is she? Birgitta is a popular and successful young Icelandic poet, writer, artist, publisher and anti-war activist, who had no inkling until quite recently that she was destined to become a politician. Then in 2008, Iceland underwent a financial crisis. It became clear that the crisis was due to corrupt links of politicians with Iceland's financial sector. In 2009, Birgitta ran for the Icelandic Parliament (Althingi, the oldest parliament in the world) as part of the reform movement.

Believing that lack of free information was the main cause of the corruption behind Iceland's 2008 crisis, Birgitta Jonsdottir persuaded her colleagues in the Althingi to pass unanimously a law calling for complete freedom of information in Iceland. She also worked closely with Julian Assange to produce the video "Collateral Murder".¹¹

Under Birgitta Jonsdottir's leadership, Icelandic parliamentarians have passed laws which will make make Iceland a safe haven for journalistic freedom. In so doing, they will help to re-establish democratic government throughout the world, a vital step if nuclear and climatic disasters are to be averted.

4.7 Racism, colonialism and exceptionalism

It seems to be possible for nations, and the majority of their citizens, to commit the worst imaginable atrocities, including torture, murder and genocide, while feeling that what they are doing is both noble and good. Some understanding of how this is possible can be gained by watching the 3-part BBC documentary, "The History of Racism".

The series was broadcast by BBC Four in March 2007. and videos of the broadcasts are available on the Internet. Watching this eye-opening documentary can give us much insight into the link between racism and colonialism. We can also begin to see how both racism and colonialism are linked to US exceptionalism and neocolonialism.

Looking at the BBC documentary we can see how often in human history economic greed and colonial exploitation have been justified by racist theories. The documentary describes almost unbelievable cruelties committed against the peoples of the Americas and Africa by Europeans. For example, in the Congo, a vast region which King Leopold II of

¹¹ <https://en.immi.is/media/documentaries-on-immi/>
<http://birgitta.is>
<http://en.immi.is>

Belgium claimed as his private property, the women of villages were held as hostages while the men were forced to gather rubber in the forests. Since neither the men nor the women could produce food under these circumstances, starvation was the result.

Leopold's private army of 90,000 men were issued ammunition, and to make sure that they used it in the proper way, the army was ordered to cut off the hands of their victims and send them back as proof that the bullets had not been wasted. Human hands became a kind of currency, and hands were cut off from men, women and children when rubber quotas were not fulfilled. Sometimes more than a thousand human hands were gathered in a single day. During the rule of Leopold, roughly 10,000,000 Congolese were killed, which was approximately half the population of the region.

According to the racist theories that supported these atrocities, it was the duty of philanthropic Europeans like Leopold to bring civilization and the Christian religion to Africa. Similar theories were used to justify the genocides committed by Europeans against the native inhabitants of the Americas. Racist theories were also used to justify enormous cruelties committed by the British colonial government in India. For example, during the great famine of 1876-1878, in which ten million people died, the Viceroy, Lord Lytton, oversaw the export from India to England of a record 6.4 million hundredweight of wheat.

Meanwhile, in Europe, almost everyone was proud of the role which they were playing in the world. All that they read in newspapers and in books or heard from the pulpits of their churches supported the idea that they were serving the non-Europeans by bringing them the benefits of civilization and Christianity. Kipling wrote: "Take up the White Man's burden, Send forth the best ye breed, Go bind your sons to exile, To serve your captives' need; To wait in heavy harness, On fluttered folk and wild, Your new-caught, sullen peoples, Half-devil and half-child." On the whole, the mood of Europe during this orgy of external cruelty and exploitation, was self-congratulatory.

Can we not see a parallel with the self-congratulatory mood of the American people and their allies, who export violence, murder, torture and neocolonialism to the whole world, and who justify it by thinking of themselves as "exceptional"?

The world urgently needs a new ethic, in which loyalty to humanity as a whole is fundamental. Racism, colonialism and exceptionalism can have no place in the future if humanity is to survive in an era of thermonuclear weapons.

4.8 The agony of Iraq

There is a close relationship between petroleum and war. James A. Paul, Executive Director of the Global Policy Forum, has described this relationship very clearly in the following words:

"Modern warfare particularly depends on oil, because virtually all weapons systems rely on oil-based fuel - tanks, trucks, armored vehicles, self-propelled artillery pieces, airplanes, and naval ships. For this reason, the governments and general staffs of powerful nations seek to ensure a steady supply of oil during wartime, to fuel oil-hungry military forces in far-flung operational theaters."

“Just as governments like the US and UK need oil companies to secure fuel for their global war-making capacity, so the oil companies need their governments to secure control over global oilfields and transportation routes. It is no accident, then, that the world’s largest oil companies are located in the world’s most powerful countries.”

“Almost all of the world’s oil-producing countries have suffered abusive, corrupt and undemocratic governments and an absence of durable development. Indonesia, Saudi Arabia, Libya, Iraq, Iran, Angola, Colombia, Venezuela, Kuwait, Mexico, Algeria - these and many other oil producers have a sad record, which includes dictatorships installed from abroad, bloody coups engineered by foreign intelligence services, militarization of government and intolerant right-wing nationalism.”

Iraq, in particular, has been the scene of a number of wars motivated by the West’s thirst for oil. During World War I, 1914-1918, the British captured the area (then known as Mesopotamia) from the Ottoman Empire after four years of bloody fighting. Although Lord Curzon (a member of the British War Cabinet who became Foreign Minister immediately after the war) denied that the British conquest of Mesopotamia was motivated by oil, there is ample evidence that British policy was indeed motivated by a desire for control of the region’s petroleum. For example, Curzon’s Cabinet colleague Sir Maurice Hankey stated in a private letter that oil was “a first-class war aim”. Furthermore, British forces continued to fight after the signing of the Mudros Armistice.

In this way, they seized Mosul, the capital of a major oil-producing region, thus frustrating the plans of the French, who had been promised the area earlier in the secret Sykes-Picot Agreement. Lord Curzon was well aware of the military importance of oil, and following the end of the First World War he remarked: “The Allied cause has floated to victory on a wave of oil”.

The Sykes-Picot Agreement essentially took away from the Arabs the autonomy that they had been promised if they fought on the side of the Allies against the Turks. Today this secret double-cross continues to be a great source of bitterness.¹²

During the period between 1918 and 1930, fierce Iraqi resistance to the occupation was crushed by the British, who used poison gas, airplanes, incendiary bombs, and mobile armored cars, together with forces drawn from the Indian Army. Winston Churchill, who was Colonial Secretary at the time, regarded the conflict in Iraq as an important test of modern military-colonial methods.

An article in *The Guardian* explains that “Churchill was particularly keen on chemical weapons, suggesting that they be used ‘against recalcitrant Arabs as an experiment... I am strongly in favour of using poison gas against uncivilized tribes...’”¹³

In 1932, Britain granted nominal independence to Iraq, but kept large military forces in the country and maintained control of it through indirect methods. In 1941, however, it seemed likely that Germany might try to capture the Iraqi oilfields, and therefore the British again seized direct political power in Iraq by means of military force. It was not

¹² <https://www.khanacademy.org/humanities/history/euro-hist/middle-east-20th-century/v/sykes-picot-agreement-and-the-balfour-declaration>

¹³ <http://www.theguardian.com/world/2003/apr/19/iraq.arts>

only Germany that Britain feared, but also US attempts to gain access to Iraqi oil.

The British fear of US interest in Iraqi oil was soon confirmed by events. In 1963 the US secretly backed a military coup in Iraq that brought Saddam Hussein's Ba'ath Party to power. In 1979 the western-backed Shah of Iran was overthrown, and the United States regarded the fundamentalist Shi'ite regime that replaced him as a threat to supplies of oil from Saudi Arabia.

Washington saw Saddam's Iraq as a bulwark against the militant Shi'ite extremism of Iran that was threatening oil supplies from pro-American states such as Kuwait and Saudi Arabia.

In 1980, encouraged to do so by the fact that Iran had lost its US backing, Saddam Hussein's government attacked Iran. This was the start of an extremely bloody and destructive war that lasted for eight years, inflicting almost a million casualties on the two nations. Iraq used both mustard gas and the nerve gases Tabun and Sarin against Iran, in violation of the Geneva Protocol.

Both the United States and Britain helped Saddam Hussein's government to obtain chemical weapons. A chemical plant, called Falluja 2, was built by Britain in 1985, and this plant was used to produce mustard gas and nerve gas. Also, according to the Riegel Report to the US Senate, May 25, (1994), the Reagan Administration turned a blind eye to the export of chemical weapon precursors to Iraq, as well as anthrax and plague cultures that could be used as the basis for biological weapons. According to the Riegel Report, "records available from the supplier for the period 1985 until the present show that during this time, pathogenic (meaning disease producing) and toxigenic (meaning poisonous), and other biological research materials were exported to Iraq pursuant to application and licensing by the US Department of Commerce."

In 1984, Donald Rumsfeld, Reagan's newly appointed Middle East Envoy, visited Saddam Hussein to assure him of America's continuing friendship, despite Iraqi use of poison gas. When (in 1988) Hussein went so far as to use poison gas against civilian citizens of his own country in the Kurdish village of Halabja, the United States worked to prevent international condemnation of the act. Indeed US support for Saddam was so unconditional that he obtained the false impression that he had a free hand to do whatever he liked in the region.

On July 25, 1990, US Ambassador April Glaspie met with Saddam Hussein to discuss oil prices and how to improve US-Iraq relations. According to the transcript of the meeting, Ms Glaspie assured Saddam that the US "had no opinion on the Arab-Arab conflicts, like your border disagreement with Kuwait." She then left on vacation. Mistaking this conversation for a green light, Saddam invaded Kuwait eight days later.

By invading Kuwait, Hussein severely worried western oil companies and governments, since Saudi Arabia might be next in line. As George Bush senior said in 1990, at the time of the Gulf War, "Our jobs, our way of life, our own freedom and the freedom of friendly countries around the world would all suffer if control of the world's great oil reserves fell into the hands of Saddam Hussein."

On August 6, 1990, the UN Security Council imposed comprehensive economic sanctions against Iraq with the aim of forcing Iraq to withdraw from Kuwait. Meanwhile, US

Secretary of State James A. Baker III used arm-twisting methods in the Security Council to line up votes for UN military action against Iraq. In Baker's own words, he undertook the process of "cajoling, extracting, threatening and occasionally buying votes".

On November 29, 1990, the Council passed Resolution 678, authorizing the use of "all necessary means" (by implication also military means) to force Iraq to withdraw from Kuwait. There was nothing at all wrong with this, since the Security Council had been set up by the UN Charter to prevent states from invading their neighbors. However, one can ask whether the response to Saddam Hussein's invasion of Kuwait would have been so wholehearted if oil had not been involved.

There is much that can be criticized in the way that the Gulf War of 1990-1991 was carried out. Besides military targets, the US and its allies bombed electrical generation facilities with the aim of creating postwar leverage over Iraq. The electrical generating plants would have to be rebuilt with the help of foreign technical assistance, and this help could be traded for postwar compliance. In the meantime, hospitals and water-purification plants were without electricity. Also, during the Gulf War, a large number of projectiles made of depleted uranium were fired by allied planes and tanks. The result was a sharp increase in cancer in Iraq.

Finally, both Shi'ites and Kurds were encouraged by the Allies to rebel against Saddam Hussein's government, but were later abandoned by the allies and slaughtered by Saddam.

The most terrible misuse of power, however, was the US and UK insistence the sanctions against Iraq should remain in place after the end of the Gulf War. These two countries used their veto power in the Security Council to prevent the removal of the sanctions. Their motive seems to have been the hope that the economic and psychological impact would provoke the Iraqi people to revolt against Saddam. However that brutal dictator remained firmly in place, supported by universal fear of his police and by massive propaganda. The effect of the sanctions was to produce more than half a million deaths of children under five years of age, as is documented by UNICEF data. The total number of deaths that the sanctions produced among Iraqi civilians probably exceeded a million, if older children and adults are included.¹⁴

Ramsey Clark, who studied the effects of the sanctions in Iraq from 1991 onwards, wrote to the Security Council that most of the deaths "are from the effects of malnutrition including marasmas and kwashiorkor, wasting or emaciation which has reached twelve per cent of all children, stunted growth which affects twenty-eight per cent, diarrhea, dehydration from bad water or food, which is ordinarily easily controlled and cured, common communicable diseases preventable by vaccinations, and epidemics from deteriorating sanitary conditions. There are no deaths crueller than these. They are suffering slowly, helplessly, without simple remedial medication, without simple sedation to relieve pain, without mercy."

In discussing Iraq, we mentioned oil as a motivation for western interest. Similar

¹⁴ <https://www.transcend.org/tms/2014/09/usauk-committed-genocide-against-iraq-people/>
<http://www.informationclearinghouse.info/article37511.htm>

considerations hold also for Afghanistan. US-controlled oil companies have long had plans for an oil pipeline from Turkmenistan, passing through Afghanistan to the Arabian Sea, as well as plans for a natural gas pipeline from Turkmenistan through Afghanistan to Pakistan.

The September 11 terrorist attacks resulted in a spontaneous worldwide outpouring of sympathy for the United States, and within the US, patriotic support of President George W. Bush at a time of national crisis. Bush's response to the attacks seems to have been to inquire from his advisors whether he was now free to invade Iraq. According to former counterterrorism chief, Richard Clarke, Bush was "obsessed" with Iraq as his principal target after 9/11.

The British Prime Minister, Tony Blair, was a guest at a private White House dinner nine days after the terrorist attacks on New York and Washington. Sir Christopher Meyer, former UK Ambassador to Washington, was also present at the dinner. According to Meyer, Blair said to Bush that they must not get distracted from their main goal - dealing with the Taliban and al-Qaeda in Afghanistan, and Bush replied: "I agree with you Tony. We must deal with this first. But when we have dealt with Afghanistan, we must come back to Iraq." Faced with the prospect of wars in both Iraq and Afghanistan, Blair did not protest, according to Meyer.

During the summer of 2002, Bush and Blair discussed Iraq by telephone. A senior official from Vice-President Dick Cheney's office who read the transcript of the call is quoted by the magazine *Vanity Fair* as saying: "The way it read was that come what may, Saddam was going to go; they said that they were going forward, they were going to take out the regime, and they were doing the right thing. Blair did not need any convincing. There was no 'Come on, Tony, we've got to get you on board'. I remember reading it and then thinking, 'OK, now I know what we're going to be doing for the next year.'" On June 1, 2002, Bush announced a new US policy which not only totally violated all precedents in American foreign policy but also undermined the United Nations Charter and international law⁶. Speaking at the graduation ceremony of the US Military Academy at West Point he asserted that the United States had the right to initiate a preemptive war against any country that might in the future become a danger to the United States. "If we wait for threats to fully materialize", he said, "we will have waited too long." He indicated that 60 countries might fall into this category, roughly a third of the nations of the world.

The assertion that the United States, or any other country, has the right to initiate preemptive wars specifically violates Chapter 1, Articles 2.3 and 2.4, of the United Nations Charter. These require that "All members shall settle their disputes by peaceful means in such a manner that international peace, security and justice are not endangered", and that "All members shall refrain in their international relations from the threat or use of force against the territorial integrity of any state, or in any other manner inconsistent with the purposes of the United Nations." The UN Charter allows a nation that is actually under attack to defend itself, but only until the Security Council has had time to act.

Bush's principle of preemptive war was promptly condemned by the Catholic Church. Senior Vatican officials pointed to the Catholic teaching that "preventive" war is unjustifiable, and Archbishop Renato Martino, prefect of the Vatican Council for Justice and

Peace, stated firmly that “unilateralism is not acceptable”.

However, in the United States, the shocking content of Bush’s West Point address was not fully debated. The speech was delivered only a few months after the 9/11 terrorist attacks, and the US supported whatever exceptional measures its President thought might be necessary for the sake of national security. American citizens, worried by the phenomenon of terrorism, did not fully appreciate that the principle of preemptive war could justify almost any aggression, and that in the long run, if practiced by all countries, it would undermine the security of the United States as well as that of the entire world.

During the spring of 2003, our television and newspapers presented us with the spectacle of an attack by two technologically superior powers on a much less industrialized nation, a nation with an ancient and beautiful culture. The ensuing war was one-sided. Missiles guided by laser beams and signals from space satellites were more than a match for less sophisticated weapons. Speeches were made to justify the attack. It was said to be needed because of weapons of mass destruction (some countries are allowed to have them, others not). It was said to be necessary to get rid of a cruel dictator (whom the attacking powers had previously supported and armed). But the suspicion remained that the attack was resource-motivated. It was about oil, or at least largely about oil. The war on Iraq was also designed to destroy a feared enemy of Israel.

The Nobel Peace Prize winner, Mairead Corrigan Maguire estimates that US and UK actions between 1990 and 2012 killed 3.3 million people, including 750,000 children.

Against the historical background discussed above, we can appreciate the enormous hypocrisy of Obama’s claim that the bombing of Iraq during his administration was “humanitarian”.

4.9 Attacks on Iran, past and present

Iran has an ancient and beautiful civilization, which dates back to 7,000 BC, when the city of Susa was founded. Some of the earliest writing that we know of, dating from from approximately 3,000 BC, was used by the Elamite civilization near to Susa. Today’s Iranians are highly intelligent and cultured, and famous for their hospitality, generosity and kindness to strangers. Over the centuries, Iranians have made many contributions to science, art and literature, and for hundreds of years they have not attacked any of their neighbors. Nevertheless, for the last 90 years, they have been the victims of foreign attacks and interventions, most of which have been closely related to Iran’s oil and gas resources. The first of these took place in the period 1921-1925, when a British-sponsored coup overthrew the Qajar dynasty and replaced it by Reza Shah.

Reza Shah (1878-1944) started his career as Reza Khan, an army officer. Because of his high intelligence he quickly rose to become commander of the Tabriz Brigade of the Persian Cossacks. In 1921, General Edmond Ironside, who commanded a British force of 6,000 men fighting against the Bolsheviks in northern Persia, masterminded a coup (financed by Britain) in which Reza Khan lead 15,000 Cossacks towards the capital. He overthrew the government, and became minister of war. The British government backed this coup

because it believed that a strong leader was needed in Iran to resist the Bolsheviks. In 1923, Reza Khan overthrew the Qajar Dynasty, and in 1925 he was crowned as Reza Shah, adopting the name Pahlavi.

Reza Shah believed that he had a mission to modernize Iran, in much the same way that Kamil Ata Turk had modernized Turkey. During his 16 years of rule in Iran, many roads were built, the Trans-Iranian Railway was constructed, many Iranians were sent to study in the West, the University of Tehran was opened, and the first steps towards industrialization were taken. However, Reza Shah's methods were sometimes very harsh.

In 1941, while Germany invaded Russia, Iran remained neutral, perhaps leaning a little towards the side of Germany. However, Reza Shah was sufficiently critical of Hitler to offer safety in Iran to refugees from the Nazis. Fearing that the Germans would gain control of the Abadan oil fields, and wishing to use the Trans-Iranian Railway to bring supplies to Russia, Britain invaded Iran from the south on August 25, 1941. Simultaneously, a Russian force invaded the country from the north. Reza Shah appealed to Roosevelt for help, citing Iran's neutrality, but to no avail. On September 17, 1941, he was forced into exile, and replaced by his son, Crown Prince Mohammed Reza Pahlavi. Both Britain and Russia promised to withdraw from Iran as soon as the war was over. During the remainder of World War II, although the new Shah was nominally the ruler of Iran, the country was governed by the allied occupation forces.

Reza Shah, had a strong sense of mission, and felt that it was his duty to modernize Iran. He passed on this sense of mission to his son, the young Shah Mohammed Reza Pahlavi. The painful problem of poverty was everywhere apparent, and both Reza Shah and his son saw modernization of Iran as the only way to end poverty.

In 1951, Mohammad Mosaddegh became Prime Minister of Iran through democratic elections. He was from a highly-placed family and could trace his ancestry back to the shahs of the Qajar dynasty. Among the many reforms made by Mosaddegh was the nationalization of the Anglo-Iranian Oil Company's possessions in Iran. Because of this, the AIOC (which later became British Petroleum), persuaded the British government to sponsor a secret coup that would overthrow Mosaddegh. The British asked US President Eisenhower and the CIA to join M16 in carrying out the coup, claiming that Mosaddegh represented a communist threat (a ludicrous argument, considering Mosaddegh's aristocratic background). Eisenhower agreed to help Britain in carrying out the coup, and it took place in 1953. The Shah thus obtained complete power over Iran.

The goal of modernizing Iran and ending poverty was adopted as an almost-sacred mission by the young Shah, Mohammed Reza Pahlavi, and it was the motive behind his White Revolution in 1963, when much of the land belonging to the feudal landowners and the crown was distributed to landless villagers. However, the White Revolution angered both the traditional landowning class and the clergy, and it created fierce opposition. In dealing with this opposition, the Shah's methods were very harsh, just as his fathers had been. Because of alienation produced by his harsh methods, and because of the growing power of his opponents, Shah Mohammed Reza Pahlavi was overthrown in the Iranian Revolution of 1979. The revolution of 1979 was to some extent caused by the British-American coup of 1953.

One can also say that the westernization, at which both Shah Reza and his son aimed, produced an anti-western reaction among the conservative elements of Iranian society. Iran was “falling between two stools”, on the one hand western culture and on the other hand the country’s traditional culture. It seemed to be halfway between, belonging to neither. Finally in 1979 the Islamic clergy triumphed and Iran chose tradition.

Meanwhile, in 1963, the US had secretly backed a military coup in Iraq that brought Saddam Hussein’s Ba’ath Party to power. In 1979, when the western-backed Shah of Iran was overthrown, the United States regarded the fundamentalist Shiite regime that replaced him as a threat to supplies of oil from Saudi Arabia. Washington saw Saddam’s Iraq as a bulwark against the Shiite government of Iran that was thought to be threatening oil supplies from pro-American states such as Kuwait and Saudi Arabia.

In 1980, encouraged to do so by the fact that Iran had lost its US backing, Saddam Hussein’s government attacked Iran. This was the start of an extremely bloody and destructive war that lasted for eight years, inflicting almost a million casualties on the two nations. Iraq used both mustard gas and the nerve gases Tabun and Sarin against Iran, in violation of the Geneva Protocol. Both the United States and Britain helped Saddam Hussein’s government to obtain chemical weapons.

The present attacks on Iran by Israel and the United States, both actual and threatened, have some similarity to the war against Iraq, which was launched by the United States in 2003. In 2003, the attack was nominally motivated by the threat that nuclear weapons would be developed, but the real motive had more to do with a desire to control and exploit the petroleum resources of Iraq, and with Israel’s extreme nervousness at having a powerful and somewhat hostile neighbor. Similarly, hegemony over the huge oil and gas reserves of Iran can be seen as one of the main reasons why the United States is presently demonizing Iran, and this is combined with Israel’s almost paranoid fear of a large and powerful Iran. Looking back on the “successful” 1953 coup against Mosaddegh, Israel and the United States perhaps feel that sanctions, threats, murders and other pressures can cause a regime change that will bring a more compliant government to power in Iran - a government that will accept US hegemony. But aggressive rhetoric, threats and provocations can escalate into full-scale war.

I do not wish to say that Iran’s present government is without serious faults. However, any use of violence against Iran would be both insane and criminal. Why insane? Because the present economy of the US and the world cannot support another large-scale conflict; because the Middle East is already a deeply troubled region; and because it is impossible to predict the extent of a war which, if once started, might develop into World War III, given the fact that Iran is closely allied with both Russia and China. Why criminal? Because such violence would violate both the UN Charter and the Nuremberg Principles. There is no hope at all for the future unless we work for a peaceful world, governed by international law, rather than a fearful world, where brutal power holds sway.

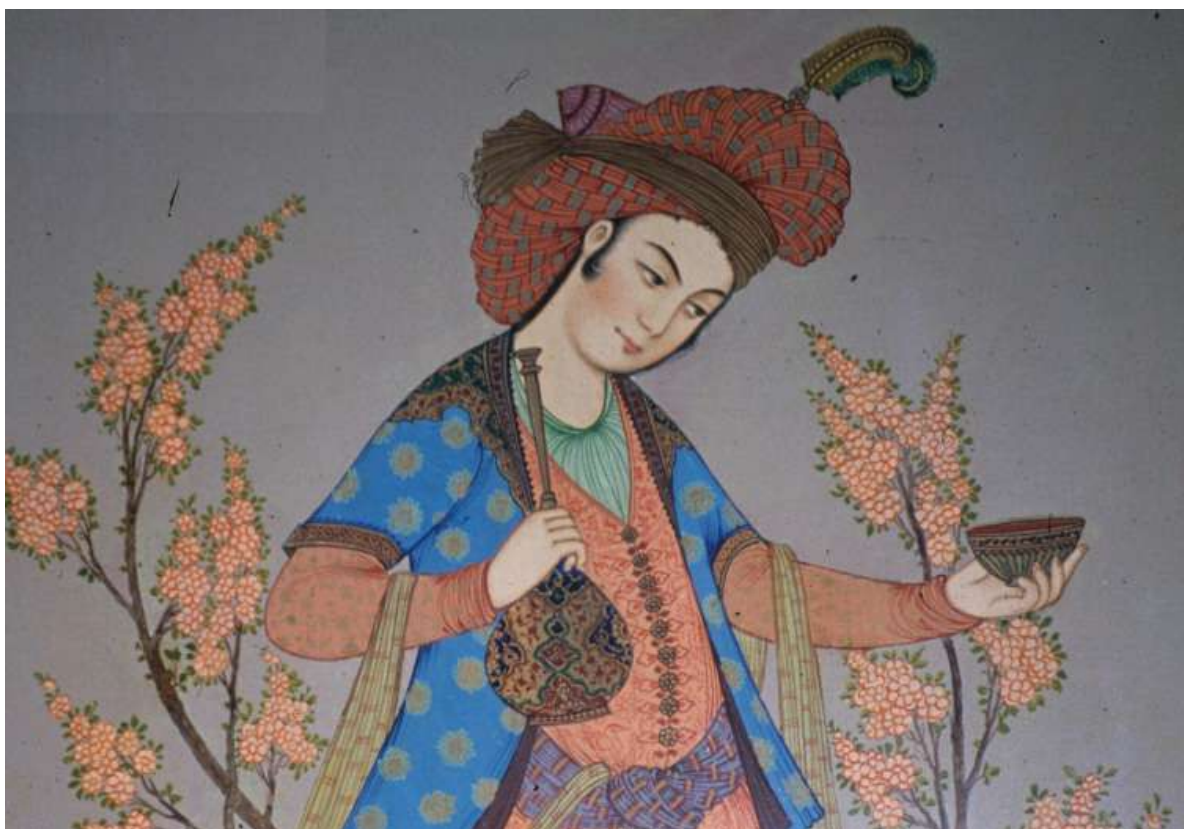


Figure 4.4: An example of Iranian art

4.10 Some contributions of Islamic culture

At a time when the corporate-controlled media of Europe and the United States are doing their utmost to fill us with poisonous Islamophobia, it is perhaps a useful antidote to remember the great role that Islamic civilization played in preserving, enlarging and transmitting to us the knowledge and culture of the ancient world.

After the burning of the great library at Alexandria and the destruction of Hellenistic civilization, most of the books of the classical Greek and Hellenistic philosophers were lost. However, a few of these books survived and were translated from Greek, first into Syriac, then into Arabic and finally from Arabic into Latin. By this roundabout route, fragments from the wreck of the classical Greek and Hellenistic civilizations drifted back into the consciousness of the West.

The Roman empire was ended in the 5th century A.D. by attacks of barbaric Germanic tribes from northern Europe. However, by that time, the Roman empire had split into two halves. The eastern half, with its capital at Byzantium (Constantinople), survived until 1453, when the last emperor was killed vainly defending the walls of his city against the Turks.

The Byzantine empire included many Syriac-speaking subjects; and in fact, beginning

in the 3rd century A.D., Syriac replaced Greek as the major language of western Asia. In the 5th century A.D., there was a split in the Christian church of Byzantium; and the Nestorian church, separated from the official Byzantine church. The Nestorians were bitterly persecuted by the Byzantines, and therefore they migrated, first to Mesopotamia, and later to south-west Persia. (Some Nestorians migrated as far as China.)

During the early part of the middle ages, the Nestorian capital at Gondisapur was a great center of intellectual activity. The works of Plato, Aristotle, Hippocrates, Euclid, Archimedes, Ptolemy, Hero and Galen were translated into Syriac by Nestorian scholars, who had brought these books with them from Byzantium.

Among the most distinguished of the Nestorian translators were the members of a family called Bukht-Yishu (meaning "Jesus hath delivered"), which produced seven generations of outstanding scholars. Members of this family were fluent not only in Greek and Syriac, but also in Arabic and Persian.

In the 7th century A.D., the Islamic religion suddenly emerged as a conquering and proselytizing force. Inspired by the teachings of Mohammad (570 A.D. - 632 A.D.), the Arabs and their converts rapidly conquered western Asia, northern Africa, and Spain. During the initial stages of the conquest, the Islamic religion inspired a fanaticism in its followers which was often hostile to learning. However, this initial fanaticism quickly changed to an appreciation of the ancient cultures of the conquered territories; and during the middle ages, the Islamic world reached a very high level of culture and civilization.

Thus, while the century from 750 to 850 was primarily a period of translation from Greek to Syriac, the century from 850 to 950 was a period of translation from Syriac to Arabic. It was during this latter century that Yuhanna Ibn Masawiah (a member of the Bukht-Yishu family, and medical advisor to Caliph Harun al-Rashid) produced many important translations into Arabic.

The skill of the physicians of the Bukht-Yishu family convinced the Caliphs of the value of Greek learning; and in this way the family played an extremely important role in the preservation of the western cultural heritage. Caliph al-Mamun, the son of Harun al-Rashid, established at Baghdad a library and a school for translation, and soon Baghdad replaced Gondisapur as a center of learning.

The English word "chemistry" is derived from the Arabic words "al-chimia", which mean "the changing". The earliest alchemical writer in Arabic was Jabir (760-815), a friend of Harun al-Rashid. Much of his writing deals with the occult, but mixed with this is a certain amount of real chemical knowledge. For example, in his Book of Properties, Jabir gives a recipe for making what we now call lead hydroxycarbonate (white lead), which is used in painting and pottery glazes:

Another important alchemical writer was Rhazes (c. 860 - c. 950). He was born in the ancient city of Ray, near Teheran, and his name means "the man from Ray". Rhazes studied medicine in Baghdad, and he became chief physician at the hospital there. He wrote the first accurate descriptions of smallpox and measles, and his medical writings include methods for setting broken bones with casts made from plaster of Paris. Rhazes was the first person to classify substances into vegetable, animal and mineral. The word "al-kali", which appears in his writings, means "the calcined" in Arabic. It is the source

of our word “alkali”, as well as of the symbol K for potassium.

The greatest physician of the middle ages, Avicenna, (Abu-Ali al Hussain Ibn Abdullah Ibn Sina, 980-1037), was also a Persian, like Rhazes. More than a hundred books are attributed to him. They were translated into Latin in the 12th century, and they were among the most important medical books used in Europe until the time of Harvey. Avicenna also wrote on alchemy, and he is important for having denied the possibility of transmutation of elements.

In mathematics, one of the most outstanding Arabic writers was al-Khwarizmi (c. 780 - c. 850). The title of his book, *Ilm al-jabr wa'd muqabalah*, is the source of the English word “algebra”. In Arabic *al-jabr* means “the equating”. Al-Khwarizmi’s name has also become an English word, “algorithm”, the old word for arithmetic. Al-Khwarizmi drew from both Greek and Hindu sources, and through his writings the decimal system and the use of zero were transmitted to the West.

One of the outstanding Arabic physicists was al-Hazen (965-1038). He did excellent work in optics, and in this field he went far beyond anything done by the Greeks. Al-Hazen studied the reflection of light by the atmosphere, an effect which makes the stars appear displaced from their true positions when they are near the horizon; and he calculated the height of the atmospheric layer above the earth to be about ten miles. He also studied the rainbow, the halo, and the reflection of light from spherical and parabolic mirrors. In his book, *On the Burning Sphere*, he shows a deep understanding of the properties of convex lenses. Al-Hazen also used a dark room with a pin-hole opening to study the image of the sun during an eclipse. This is the first mention of the camera obscura, and it is perhaps correct to attribute the invention of the camera obscura to al-Hazen.

Another Islamic philosopher who had great influence on western thought was Averroes, who lived in Spain from 1126 to 1198. His writings took the form of thoughtful commentaries on the works of Aristotle. He shocked both his Muslim and his Christian readers by maintaining that the world was not created at a definite instant, but that it instead evolved over a long period of time, and is still evolving.

In the 12th century, parts of Spain, including the city of Toledo, were reconquered by the Christians. Toledo had been an Islamic cultural center, and many Muslim scholars, together with their manuscripts, remained in the city when it passed into the hands of the Christians. Thus Toledo became a center for the exchange of ideas between east and west; and it was in this city that many of the books of the classical Greek and Hellenistic philosophers were translated from Arabic into Latin.

It is interesting and inspiring to visit Toledo. A tourist there can see ample evidence of a period of tolerance and enlightenment, when members of the three Abrahamic religions, Christianity, Judaism and Islam, lived side by side in harmony and mutual respect, exchanging important ideas which were to become the foundations of our modern civilization. One can also see a cathedral, a mosque and a synagogue, in each of which craftsmen from all three faiths worked cooperatively to produce a beautiful monument to human solidarity.

4.11 Politeness in multi-ethnic societies

The attack on Charlie Hebdo, in which 12 people were killed, claimed massive media attention worldwide. Everyone agreed that freedom of speech and democracy had been brutally attacked, and many people proclaimed “Je suis Charlie!”, in solidarity with the murdered members of the magazine’s staff.

In Denmark, it was proposed that the offending cartoons of the prophet Mohammad should be reprinted in major newspapers. However, in the United States, there was no such proposal, and in fact, US television viewers were not even allowed to see the drawings that had provoked the attack. How is this difference between Denmark and the US to be explained?

Denmark is a country with a predominantly homogeneous population, which only recently has become more diverse through the influx of refugees from troubled parts of the world. Thus, I believe, Denmark has not yet had time to learn that politeness is essential for preventing conflicts in a multi-ethnic society. On the other hand, the United States has lived with the problem for much longer.

During most of its history, the US has had substantial Spanish-speaking and Italian-speaking minorities, as well as great religious diversity. During the 1960’s the civil rights movement fought against racial prejudice and gradually achieved most of its goals. Thus, over a very long period of time, the United States learned to avoid racial and religious insults in its media, and this hard-earned wisdom has allowed the very markedly multi-ethnic US society to function with a minimum of racial and religious conflicts.

Is this a lesson that the world as a whole needs to learn? I strongly believe that it is. Globally, we are in great need of a new ethic, which regards all humans as brothers and sisters, regardless of race, religion or nationality. Human solidarity will become increasingly important in the future, as stress from climate change and the vanishing of nonrenewable resources becomes more pronounced.

To get through the difficult time ahead of us, we will need to face the dangers and challenges of the future arm in arm, respecting each other’s differing beliefs, and emphasizing our common humanity rather than our differences.

4.12 The 2016 US presidential election

In the United States, campaigns for the presidential election of 2016 might have been an occasion for a realistic discussion of the enormously important challenges which we now face, not only in the America, but also throughout the world.

The most important issues

Most thoughtful people agree that the two most important issues facing humanity today are the threat of catastrophic and uncontrollable climate change, and the threat of nuclear war. Each of these threatened disasters has the potential to destroy human civilization and

much of the biosphere. But on the whole these vitally important issues were not discussed in an honest way in the mainstream media. Instead the campaign spectacle presented to us by the media was washed down into the murky depths of stupidity by rivers of money from the fossil fuel giants and the military industrial complex.

The Republican presidential candidates were almost single-voiced in denying the reality of climate change, and they were almost unanimously behind foreign policy options that would push the world to the brink of nuclear war. What about the Democrats and Independents? We will discuss this question in a moment, but first let us look at the two major issues:

The reality of climate change

Unless rapid action is taken, the world may soon pass a tipping point after which human efforts to avoid catastrophic climate change will be useless because feedback loops will have taken over. However, our present situation is by no means hopeless, because of the extremely rapid rate of growth of renewable energy. What can governments do to help? They can stop subsidizing the fossil fuel industry! Without massive fossil fuel subsidies, renewables would be the cheaper option, and economic forces alone would drive the urgently-needed transition to 100% renewable energy.

A report by RNE21, a global renewable energy policy network, states that “Global subsidies for fossil fuels remain high despite reform efforts. Estimates range from USD 550 billion (International Energy Agency) to USD 5.6 trillion per year (International Monetary Fund), depending on how ‘subsidy’ is defined and calculated.”

“Growth in renewable energy (and energy efficiency improvements) is tempered by subsidies to fossil fuels and nuclear power, particularly in developing countries. Subsidies keep conventional energy prices artificially low, which makes it more difficult for renewable energy to compete...”

“Creating a level playing field can lead to a more efficient allocation of financial resources, helping to strengthen to advance the development of energy efficiency and renewable energy technologies. Removing fossil fuel and energy subsidies globally would reflect more accurately the true cost of energy generation.”¹⁵

An Elephant in the room

There is, so to speak, an elephant in the room; but no one wants to talk about it. Everyone (with a very few exceptions) pretends not to see it. They pretend that it is not there. What is this metaphorical elephant? It is the Pentagon’s colossal budget, which is far too sacred a thing to be mentioned in an election campaign.

The size of this budget is almost beyond comprehension: 610 billion dollars per year. This does not include nuclear weapons research, maintenance, cleanup and production, which are paid for by the Department of Energy. Nor does it include payments in pensions

¹⁵ <http://www.ren21.net/status-of-renewables/global-status-report/>

to military retirees and widows, nor interest on debt for past wars, nor the State Department's financing foreign arms sales and military-related development assistance, nor special emergency grants for current wars. Nor are the expenses of the Department of Homeland Security included in the Pentagon's budget, nor those of the CIA, nor the huge budget of NSA and other dark branches of the US government. One can only guess at the total figure if everything should be included, but it is probably well over a trillion dollars per year.

The hidden presence in the room is a trillion-dollar elephant. Perhaps we should include subsidies to fossil fuel giants. Then we would have a multi-trillion-dollar elephant. But it is too sacred to be mentioned. Cut Medicare! Cut pensions! Cut Social Security! Abolish food stamps! Sacrifice support for education! We are running out of money! (Meanwhile the elephant stands there, too holy to be seen.)

Bernie Sanders and Jill Stein

I will not say anything about Hillary Clinton, because she is almost indistinguishable from the Republican presidential candidates, both on the issues related to war and on those related to the environment. But let us now have a look at the positions of Senator Bernie Sanders and Dr. Jill Stein.¹⁶

In May, when he started his campaign for nomination as the Democratic Party's presidential candidate, Bernie Sanders, seemed to be an outsider with no chance of winning. But on June 25, the New York Times reported that, in the New Hampshire primaries, Sanders was running in a statistical dead heat with heavily financed Hillary Clinton. On July 1, Bernie Sanders made history by drawing a capacity crowd of 10,000 wildly cheering supporters to a sports stadium in Madison Wisconsin, the largest crowd assembled by any candidate in the current presidential race. Bernie now seems to have a real chance of winning the nomination, and perhaps the 2016 election, because of an avalanche of popular support.

Here is Bernie's statement about income inequality: "What we have seen is that while the average person is working longer hours for lower wages, we have seen a huge increase in income and wealth inequality, which is now reaching obscene levels. This is a rigged economy, which works for the rich and the powerful, and is not working for ordinary Americans: "You know, this country just does not belong to a handful of billionaires."

Sanders believes that "no single financial institution should have holdings so extensive that its failure would send the world economy into crisis. If an institution is too big to fail, it is too big to exist."

Sanders is opposed to the Trans-Pacific Partnership trade agreement, which he has called "a continuation of other disastrous trade agreements, like NAFTA and CAFTA..."

¹⁶ <http://edition.cnn.com/2015/07/01/politics/bernie-sanders-crowds-wisconsin-2016/>
<http://www.commondreams.org/news/2015/07/02/sanders-draws-10000-wisconsin-support-revolution-doubles-iowa>
<http://www.commondreams.org/views/2015/07/01/bernie-sanders-too-radical-america>



Figure 4.5: When Senator Bernie Sanders began his campaign for the Democratic presidential nomination, few people believed that he could succeed. But as his campaign gained momentum, enormous crowds were attracted to his reformist speeches, and small individual donors supported his expenses. Although the crowds at Sanders' speeches were at least four times the size of those attending the rallies of other candidates, they were not reported in the mass media. Sanders' campaign was also sabotaged by the corporate-controlled Democratic National Committee. His huge popularity remains undimmed today, despite his loss in the 2016 primary. He advocates a social system for the United States similar to these which have made the Scandinavian countries leaders in both human development and human happiness indices.

Concerning jobs, Bernie Sanders has said that “America once led the world in building and maintaining a nationwide network of safe and reliable bridges and roads. Today, nearly a quarter of the nation’s 600,000 bridges have been designated as structurally deficient or functionally obsolete...Almost one-third of America’s major roads are in poor or mediocre condition...,” He believes that secure jobs can be created by developing transportation and renewable energy infrastructure. Sanders also supports the development of worker-owned cooperatives.

Sanders has stated that he believes that the Citizens United decision is “one of the Supreme Court’s worst decisions ever” and that it has allowed big money to “deflect attention from the real issues” facing voters. He has proposed a constitutional amendment to overturn the ruling, and he warns that “We now have a political situation where billionaires are literally able to buy elections and candidates.”

Sanders strongly opposed the 2003 invasion of Iraq, saying: “I am opposed to giving the President a blank check to launch a unilateral invasion and occupation of Iraq... As a caring Nation, we should do everything we can to prevent the horrible suffering that a war will cause. War must be the last recourse in international relations, not the first. ...I am deeply concerned about the precedent that a unilateral invasion of Iraq could establish in terms of international law and the role of the United Nations.”

Bernie Sanders voted against the USA Patriot Act and all of its renewals and has characterized the National Security Agency as “out of control.” He has frequently criticized warrantless wiretapping and the collection of the phone, email, library, and Internet browsing records of American citizens without due process. Bernie says: “In my view, NSA is out of control and operating in an unconstitutional manner. I worry very much about kids growing up in a society where they think ‘I’m not going to talk about this issue, read this book, or explore this idea because someone may think I’m a terrorist’. That’s not the kind of free society I want for our children.”

You can find more information about Bernie, and other planks in his platform, in the Wikipedia article.

But who is Jill?

Dr. Jill Stein is a physician from Massachusetts, who ran twice for Governor of that state. She also ran for US President in 2012 as the Green Party’s candidate, and again in 2016. She is one of the few people who is willing to talk about the elephant in the room. Here are a few things that Dr. Stein has said:¹⁷

“Our Power to the People Plan lays out these solutions in a blueprint to move our economy from the greed and exploitation of corporate capitalism to a human-centered system that puts people, planet and peace over profit. This plan would end unemployment and poverty; avert climate catastrophe; build a sustainable and just economy; and recognize the dignity

¹⁷ <http://www.commondreams.org/news/2015/06/24/under-green-party-banner-jill-stein-officially-sets-sights-2016>



Figure 4.6: Dr. Jill Stein was the Green Party's presidential candidate in 2016. She was the only candidate who was willing to talk about the "elephant in the room" - the obscenely enormous military budget that consumed almost a trillion dollars that could otherwise have been used for social goals, health, education and infrastructure.

and human rights of everyone in our society. The plan affirms that we have the power to take back the future.”

“We have the power to create a Green New Deal, providing millions of jobs by transitioning to 100% clean renewable energy by 2030.”

“We have the power to provide a living-wage job and worker’s rights to every American.”

“We have the power to end poverty and guarantee economic human rights.”

“We have the power to make health-care a human right through an improved Medicare for All system.”

“We have the power to provide education as a right and abolish student debt.”

“We have the power to create a just economy.”

“We have the power to protect Mother earth.”

“We have the power to end institutional racism, police brutality and mass incarceration-”

“We have the power to restore our constitutional rights.”

“We have the power to end our wars of aggression, close foreign bases and cut military expenditures 50%.”

“We have the power to empower the people.”

But what happened in the disastrous 2016 election?

One is reminded of the words of Yeats: “Things fall apart. The centre cannot hold. The best lack all conviction, while the worst are filled with passionate intensity. And what rough beast, its time come round at last, slouches towards Bethlehem to be born?”

Here are some excerpts from the transcript of a Democracy Now! program¹⁸ in which Amy Goodman interviews Michael Moore:

AMY GOODMAN: This is Democracy Now! I’m Amy Goodman, as we return to our conversation with the Academy Award-winning filmmaker Michael Moore. His new film, out today, *Fahrenheit 11/9*. I spoke to him earlier this week.

¹⁸<https://truthout.org/video/michael-moore-democrats-fatal-mistake-was-not-taking-trump-seriously/>



Figure 4.7: Against expectations, Donald Trump who, in the words of Michael Moore, is a “wretched, ignorant, dangerous part-time clown and full-time sociopath”, was elected in 2016. What happened? Disillusioned by the way in which the immensely popular Senator Bernie Sanders was sabotaged by the media and by the Democratic National Committee, and despising Hillary Clinton for her involvement in US wars and Wall Street banks, many progressive voters stayed away from the polls. In their absence, Trump won narrowly. He lost the popular vote, but won the electoral vote. Today, the White House is a morass of dissension, erratic decisions and lies.



Figure 4.8: Disillusioned progressive voters who stayed at home were responsible for Trump's victory.



Figure 4.9: The stain will be indelible. Kavanaugh is both a multiple perjurer under oath before congress and a multiple attempted rapist. His tenure on the US supreme court will always be tainted by the highly partisan and morally bankrupt process that forced through his US senate confirmation on October 7, 2018. The photo shows angry crowds protesting the confirmation. One fervently hopes that public action will restore democracy to the United States.

AMY GOODMAN: In your film, you start with that remarkable day, but you actually start before. And you were talking about this way before. You wrote in July 2016, again before Trump was elected - *5 Reasons Why Trump Will Win*¹⁹. In it, you wrote “Donald J. Trump is going to win in November. This wretched, ignorant, dangerous part-time clown and full-time sociopath is going to be our next president. President Trump. Go ahead and say the words, ‘cause you’ll be saying them for the next four years: PRESIDENT TRUMP.” You went on to list the five reasons you believed Trump would be president: Trump’s focus on the Midwest, the last stand of the angry white man, the Hillary problem, the depressed Sanders vote, and what you call the Jesse Ventura effect - people voting for Trump simply to disrupt the system. You were predicting this well in advance...

MICHAEL MOORE: Yes, OK. First of all, I take no pleasure in being right. I never wanted to be more wrong when I wrote that. But I had just come back from the UK, where my last film, *Where To Invade Next* had just opened, and so I went and did press throughout the UK, in London, in Sheffield, ending up in Belfast, and a lot of crowds and theater screenings with the working class of the United Kingdom.

This was the week before Brexit, and I saw what I see and hear a lot in Michigan and Wisconsin and Pennsylvania and Ohio and elsewhere, where people didn’t necessarily like or were in love with the idea of Brexit, but they loved being able to have a chance to go into the voting booth and throw a Molotov cocktail into the middle of a system that had left them broke and in despair.

And when we left the UK there just before the vote, we were all saying - my crew and friends - “Wow, this just sounds like many parts of the United States, and it looks like Brexit’s going to pass.” Even though all the polls said that it wasn’t going to. We came back here and of course all the polls - Brexit did pass - and all of the polls here were saying that Hillary had it in the bag.

:

AMY GOODMAN: And you have people like Les Moonves, now disgraced, who is saying things like, “It’s great for us. It just may not be great for America.”²⁰

MICHAEL MOORE: Les Moonves, who was the head of CBS, and Jeff Zucker, who is the head of CNN, both kind of copped to the fact that they were putting him on the air a lot for free. He didn’t have to pay for any of this. It’s why Hillary - if you look at what she spent, she spent - well, he spent about... \$300 million. She spent almost a billion on her campaign. He didn’t have to spend a billion, because he got all this free airtime from the mainstream networks. And in the film, I show Moonves and Zucker yukking it up over how great it is that Donald Trump is running, because it was very good for business and they sold a lot more ads.

¹⁹<https://michaelmoore.com/trumpwillwin/>

²⁰He said: “Who would have thought that this circus would come to town? But, you know - it may not be good for America, but it’s damn good for CBS. That’s all I gotta say.”

AMY GOODMAN: So you have the red carpet treatment from the networks. Wall-to-wall coverage of his speeches. Often - I mean, the other candidates, like for example Bernie Sanders, got nothing - nothing like this... Even though he had some of the largest crowds of any of the candidates, Republican and Democrat.

Moore's film *Fahrenheit 11/9* has received strongly positive reviews. Variety calls it "fearless and profound, and the reviewer adds: "Fahrenheit 11/9 is truly about something, and that's Michael Moore's fearless - and I would say accurate - perception that what's going on in our government today is more sinister than even a lot of liberals think. In Fahrenheit 11/9, Moore captures how the groundwork is being laid for a full-scale destruction of democracy... the movie, in its way, summons something ominous and powerful. It's not a screed - it's a warning. It says, quite wisely: Take action now, or you may no longer have the opportunity to do so."

New York Magazine proclaims *Fahrenheit 11/9* as "one the the most urgent films ever made. You need to see this film!"

Salon says: "This film really is Moore's tour de force - a forceful, moving, and compelling call to action. A number of Michael Moore's films have made history. This time he's asking his audience to be the ones to do it."

Other critics have called it "soul-stirring," "blistering," "ferocious," "part exposé, part doomsday warning, and part call to arms," "brutally honest...a powerfully blunt instrument" "incisively funny" and "a blistering broadside!"

Here are some excerpts from Glen Greenwald's review of *Fahrenheit 11/9*²¹:

"Fahrenheit 11/9," the title of Michael Moore's new film that opens today in theaters, is an obvious play on the title of his wildly profitable Bush-era "Fahrenheit 9/11," but also a reference to the date of Donald J. Trump's 2016 election victory. Despite that, Trump himself is a secondary figure in Moore's film, which is far more focused on the far more relevant and interesting questions of what - and, critically, who - created the climate in which someone like Trump could occupy the Oval Office.

For that reason alone, Moore's film is highly worthwhile regardless of where one falls on the political spectrum. The single most significant defect in U.S. political discourse is the monomaniacal focus on Trump himself, as though he is the cause - rather than the by-product and symptom - of decades-old systemic American pathologies...

The lie-fueled destruction of Vietnam and Iraq, the worldwide torture regime, the 2008 financial collapse and subsequent bailout and protection of those responsible for it, the foreign kidnapping and domestic rounding up of Muslims, the record-setting Obama-era deportations and whistleblower prosecutions, the obliteration of Yemen and Libya, the embrace of Mubarak, Sisi, and Saudi despots, the years of bipartisan subservience to Wall Street at everyone else's expense, the full-scale immunity vested on all the elites responsible

²¹<https://www.transcend.org/tms/2018/09/michael-moores-fahrenheit-11-9-aims-not-at-trump-but-at-those-who-created-the-conditions-that-led-to-his-rise/>



for all those crimes - it's all blissfully washed away as we unite to commemorate the core decency of America as George Bush gently hands a piece of candy to Michelle Obama at the funeral of the American War Hero and Trump-opponent-in-words John S. McCain, or as hundreds of thousands of us re-tweet the latest bromide of Americana from the leaders of America's most insidious security state, spy and police agencies.

Beyond nationalistic myth-building, there are substantial commercial, political and reputational benefits to this Trump-centered mythology. An obsessive fixation on Trump has single-handedly saved an entire partisan cable news network from extinction, converting its once ratings-starved, close-to-being-fired prime-time hosts into major celebrities with contracts so obscenely lucrative as to produce envy among most professional athletes or Hollywood stars...

The overriding value of "Fahrenheit 11/9" is that it avoids - in fact, aggressively rejects - this ahistorical manipulation. Moore dutifully devotes a few minutes at the start of his film to Trump's rise, and then asks the question that dominates the rest of it, the one the political and media establishment has steadfastly avoided examining except in the most superficial and self-protective ways: "how ... did this happen"?...

To Moore's credit, virtually no powerful U.S. factions escape indictment in "Fahrenheit 11/9." The villains of Flint and West Virginia are two Republican governors. But their accomplices, every step of the way, are Democrats. This, Moore ultimately argues, is precisely why people had lost faith in the ability of elections generally, and the Democratic Party specifically, to improve their lives.

Suggestions for further reading

1. Sir Percy Sykes, *A History of Persia* - 2nd edition, MacMillan, (1921).

2. Paula K. Byers, *Reza Shah Pahlavi*, Encyclopedia of World Biography, (1998)-
3. Roger Homan, *The Origins of the Iranian Revolution*, International Affairs **56/4**, 673-7, (Autumm, 1980).
4. Daniel Yergin, *The Prize: The Epic Quest for Oil, Money and Power*, Simon and Schuster, (1991).
5. A. Sampson, *The Seven Sisters: The Great Oil Companies of the World and How They Were Made*, Hodder and Staughton, (1988).

Chapter 5

THE DEEP STATE

5.1 Edward Snowden's revelations

Can a government, many of whose operations are secret, be a democracy? Obviously this is impossible. The recent attempts of the United States to arrest whistleblower Edward Snowden call attention to the glaring contradiction between secrecy and democracy.

In a democracy, the power of judging and controlling governmental policy is supposed to be in the hands of the people. It is completely clear that if the people do not know what their government is doing, then they cannot judge or control governmental policy, and democracy has been abolished. There has always been a glaring contradiction between democracy and secret branches of the government, such as the CIA, which conducts its assassinations and its dirty wars in South America without any public knowledge or control.

The gross, wholesale electronic spying on citizens revealed by Snowden seems to be specifically aimed at eliminating democracy. It is aimed at instilling universal fear and conformity, fear of blackmail and fear of being out of step, so that the public will not dare to oppose whatever the government does, no matter how criminal or unconstitutional.

Henry Kissinger famously remarked: "The illegal we do at once. The unconstitutional takes a little longer". Well, Henry, that may have been true in your time, but today the unconstitutional does not take long at all.

The Magna Carta is trashed. No one dares to speak up. Habeas Corpus is trashed. No one dares to speak up. The United Nations Charter is trashed. No one dares to speak up. The Universal Declaration of Human Rights is trashed. No one dares to speak up. The Fourth Amendment to the US Constitution is trashed. No one dares to speak up. The President claims the right to kill both US and foreign citizens, at his own whim. No one dares to speak up.

But perhaps this is unjust. Perhaps some people would dare to protest, except that they cannot get their protests published in the mainstream media. We must remember that the media are owned by the same corporate oligarchs who own the government.

George Orwell, you should be living today! We need your voice today! After Snowden's revelations, the sale of Orwell's "1984" soared. It is now on the bestseller list. Sadly,

Orwell's dystopian prophesy has proved to be accurate in every detail.

What is the excuse for the massive spying reported by Snowden, spying not only on US citizens but also on the citizens of other countries throughout the world? "We want to protect you from terrorism.", the government answers. But terrorism is not a real threat, it is an invented one. It was invented by the military-industrial complex because, at the end of the Cold War, this enormous money-making conglomerate lacked enemies.

Globally, the number of people killed by terrorism is vanishingly small compared to the number of children who die from starvation every year. It is even vanishingly small compared with the number of people who are killed in automobile accidents. It is certainly small compared with the number of people killed in wars aimed at gaining western hegemony over oil-rich regions of the world.

But in Shelley's words, "We are many; they are few!" The people who want democracy greatly outnumber those who profit from maintaining a government based on secrecy and fear. Let us "rise like lions after slumbers, in unvanquishable numbers". Let us abolish governmental secrecy and reclaim our democracy.

5.2 The jaws of power

"Every government degenerates when trusted to the rulers of the people alone. The people themselves, therefore, are its only safe depositories." Thomas Jefferson, (1743-1826)

"The jaws of power are always open to devour, and her arm is always stretched out, if possible, to destroy the freedom of thinking, speaking, and writing." John Adams, (1735-1826)

According to the Nuremberg Principles, the citizens of a country have a responsibility for the crimes that their governments commit. But to prevent these crimes, the people need to have some knowledge of what is going on. Indeed, democracy cannot function at all without this knowledge.

What are we to think when governments make every effort to keep their actions secret from their own citizens? We can only conclude that although they may call themselves democracies, such governments are in fact oligarchies or dictatorships.

At the end of World War I, it was realized that secret treaties had been responsible for its outbreak, and an effort was made to ensure that diplomacy would be more open in the future. Needless to say, these efforts did not succeed, and diplomacy has remained a realm of secrecy.

Many governments have agencies for performing undercover operations (usually very dirty ones). We can think, for example of the KGB, the CIA, M5, or Mossad. How can countries that have such agencies claim to be democracies, when the voters have no knowledge of or influence over the acts that are committed by the secret agencies of their governments?

Nuclear weapons were developed in secret. It is doubtful whether the people of the

United States would have approved of the development of such antihuman weapons, or their use against an already-defeated Japan, if they had known that these things were going to happen. The true motive for the nuclear bombings was also kept secret. In the words of General Groves, speaking confidentially to colleagues at Los Alamos, the real motive was “to control the Soviet Union”.

The true circumstances surrounding the start of the Vietnam war would never have been known if Daniel Ellsberg had not leaked the Pentagon Papers. Ellsberg thought that once the American public realized that their country’s entry into the war was based on a lie, the war would end. It did not end immediately, but undoubtedly Ellsberg’s action contributed to the end of the war.

We do not know what will happen to Julian Assange. If his captors send him to the US, and if he is executed there for the crime of publishing leaked documents (a crime that he shares with the New York Times), he will not be the first martyr to the truth. The ageing Galileo was threatened with torture and forced to recant his heresy - that the earth moves around the sun. Galileo spent the remainder of his days in house arrest. Giordano Bruno was less lucky. He was burned at the stake for maintaining that the universe is larger than it was then believed to be. If Julian Assange becomes a martyr to the truth like Galileo or Bruno, his name will be honored by generations in the future, and the shame of his captors will be remembered too.

5.3 The deep state

Can a government, many of whose operations are secret, be a democracy? Obviously this is impossible. The recent attempts of the United States to arrest whistleblower Edward Snowden call attention to the glaring contradiction between secrecy and democracy.

In a democracy, the power of judging and controlling governmental policy is supposed to be in the hands of the people. It is completely clear that if the people do not know what their government is doing, then they cannot judge or control governmental policy, and democracy has been abolished. There has always been a glaring contradiction between democracy and secret branches of the government, such as the CIA, which conducts its assassinations and its dirty wars in South America without any public knowledge or control.

The gross, wholesale electronic spying on citizens revealed by Snowden seems to be specifically aimed at eliminating democracy. It is aimed at instilling universal fear and conformity, fear of blackmail and fear of being out of step, so that the public will not dare to oppose whatever the government does, no matter how criminal or unconstitutional.

Henry Kissinger famously remarked: “The illegal we do at once. The unconstitutional takes a little longer”. Well, Henry, that may have been true in your time, but today the unconstitutional does not take long at all.

The Magna Carta is trashed. No one dares to speak up. Habeas Corpus is trashed. No one dares to speak up. The United Nations Charter is trashed. No one dares to speak up. The Universal Declaration of Human Rights is trashed. No one dares to speak up. The



Figure 5.1: The sales of George Orwell's 1984 soared after Snowden's revelations.

Fourth Amendment to the US Constitution is trashed. No one dares to speak up. The President claims the right to kill both US and foreign citizens, at his own whim. No one dares to speak up.

But perhaps this is unjust. Perhaps some people would dare to protest, except that they cannot get their protests published in the mainstream media. We must remember that the media are owned by the same corporate oligarchs who own the government.

George Orwell, you should be living today! We need your voice today! After Snowden's revelations, the sale of Orwell's "1984" soared. It is now on the bestseller list. Sadly, Orwell's dystopian prophesy has proved to be accurate in every detail.

What is the excuse for for the massive spying reported by Snowden, spying not only on US citizens but also on the citizens of other countries throughout the world? "We want to protect you from terrorism.", the government answers. But terrorism is not a real threat, it is an invented one. It was invented by the military-industrial complex because, at the end of the Cold War, this enormous money-making conglomerate lacked enemies.

Globally, the number of people killed by terrorism is vanishingly small compared to the number of children who die from starvation every year. It is even vanishingly small



compared with the number of people who are killed in automobile accidents. It is certainly small compared with the number of people killed in wars aimed at gaining western hegemony over oil-rich regions of the world.

In order to make the American people really fear terrorism, and in order to make them willing to give up their civil liberties, a big event was needed, something like the 9/11 attacks on the World Trade Center.

There is strong evidence, available on the Internet for anyone who wishes to look at it, that the US government knew well in advance that the 9/11 attacks would take place, and that government agents made the disaster worse than it otherwise would have been by planting explosives in the buildings of the World Trade Center. For example, CIA insider Susan Lindauer has testified that the US government knew about the planned attacks as early as April, 2001. Other experts have testified that explosives must have been used to bring the buildings down.

Numerous samples of the dust from the disaster were collected by people in New York City, and chemical analysis of the dust has shown the presence of nanothermite, a compound that produces intense heat. Pools of recently-melted steel were found in the ruins of the buildings before these were sealed off from the public. An ordinary fire does not produce temperatures high enough to melt steel.

Thus it seems probable that the US government participated in the 9/11 attacks, and used them in much the same way that the Nazis used the Reichstag fire, to abridge civil liberties and to justify a foreign invasion. Soon afterward, the Patriot Act was passed. It's Orwellian name is easily understood by anyone who has read "1984".

But in Shelley's words, "We are many; they are few!" The people who want democracy greatly outnumber those who profit from maintaining a government based on secrecy and fear. Let us "rise like lions after slumbers, in unvanquishable numbers". Let us abolish governmental secrecy and reclaim our democracy.



Figure 5.2: Susan Lindauer

Governmental secrecy is not something new. Secret diplomacy contributed to the outbreak of World War I, and the secret Sykes-Picot agreement later contributed to the bitterness of conflicts in the Middle East. However, in recent years, governmental secrecy has grown enormously.

The revelations of Edward Snowden and others have shown that the number of people involved in secret operations of the United States government is now as large as the entire population of Norway: roughly 5 million. The influence of this dark side of government has become so great that no president is able to resist it.

In a recent article, John Chuckman remarked that “The CIA is now so firmly entrenched and so immensely well financed (much of it off the books, including everything from secret budget items to the peddling of drugs and weapons) that it is all but impossible for a president to oppose it the way Kennedy did. Obama, who has proved himself to be a fairly weak character from the start, certainly has given the CIA anything it wants. The dirty business of ISIS in Syria and Iraq is one project. The coup in Ukraine is another. The pushing of NATO’s face right against Russia’s borders is another. Several attempted coups in Venezuela are still more. And the creation of a drone air force for extra-judicial killings in half a dozen countries is yet another. They don’t resemble projects we would expect from a smiley-faced intelligent man who sometimes wore sandals and refused to wear a flag pin on his lapel during his first election campaign.”¹

Of course the United States government is by no means alone in practicing excessive secrecy: Scott Horton recently wrote an article entitled *How to Rein in a Secretive Shadow Government Is Our National Security Crisis*. He dedicated the article to the Soviet dissident Andrei Sakharov because, as he said, “Sakharov recognized that the Soviet Union

¹<http://www.informationclearinghouse.info/article41222.htm>

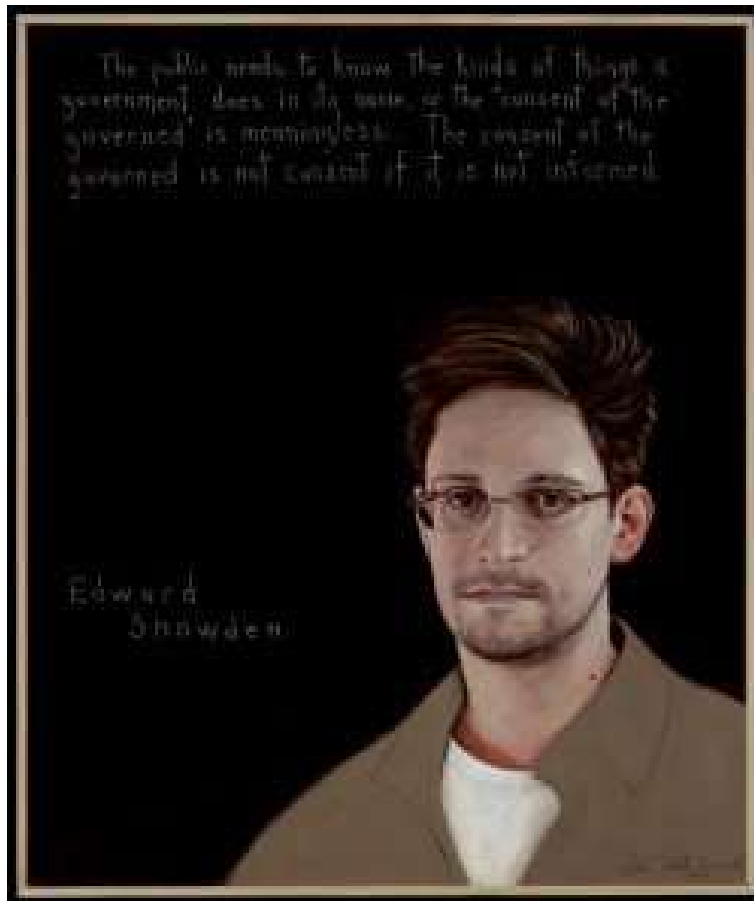


Figure 5.3: The revelations of Edward Snowden and others have shown that the number of people involved in secret operations of the United States government is now as large as the entire population of Norway: roughly 5 million.

rested on a colossal false premise: it was not so much socialism (though Sakharov was certainly a critic of socialism) as it was the obsession with secrecy, which obstructed the search for truth, avoided the exposure of mistakes, and led to the rise of powerful bureaucratic elites who were at once incompetent and prone to violence.”

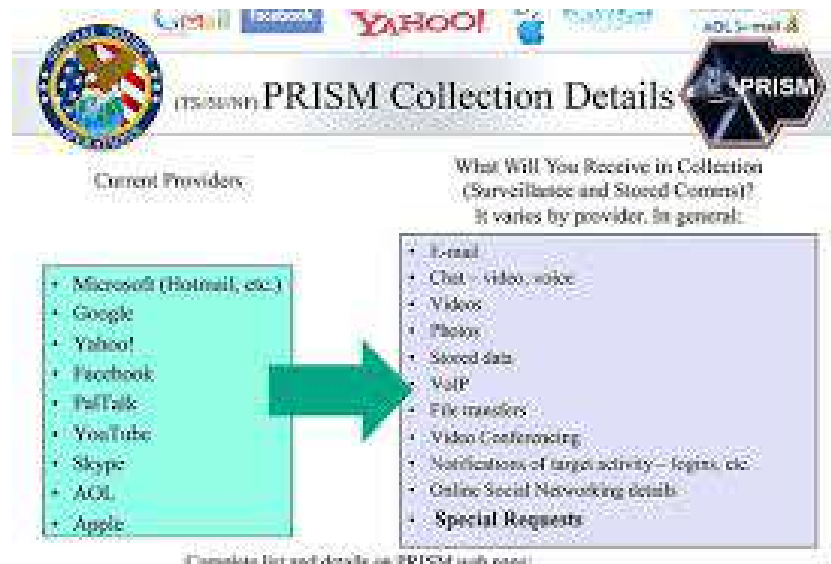


Figure 5.4: One of the power points used by NSA to sell their comprehensive collection of private data.



Figure 5.5: The data of major Internet corporations was stolen without their knowledge or consent.



Figure 5.6: These huge buildings in Fort Meade, Maryland, are the main headquarters of NSA.



Figure 5.7: Angela Merkel's telephone was bugged by NSA. In a cartoon depicting the incident, she says "Tell the Americans to stop listening to our telephone conversations". Her aide replies, "You just did".



Figure 5.8: Big Brother is watching you.

5.4 *The United States of Secrets*

A review by Variety

Here are some excerpts from *Variety's* review of the first two parts of the series:

“Methodical and comprehensive, *Frontline's* documentary *The United States of Secrets* offers a blow-by-blow account of the Bush administration's embrace of potentially illegal spying/eavesdropping techniques, President Obama's decision to continue them (despite campaign promises to the contrary) and, most compellingly, those who sought to blow the whistle on government overreach, culminating with Edward Snowden's unprecedented dump of classified documents. If the two-part project breaks little new ground, it's an utterly thorough primer on what transpired that almost plays like a John Le Carre thriller, with remarkably candid interviews from participants on all sides...

“*United States of Secrets* also details the role played by the Fourth Estate, as frustrated officials reluctantly began going to the press, feeling they had no other recourse to beat back constitutional intrusions. Yet the New York Times, after nailing down the story, ultimately balked at running it, at the urging of the Bush administration...”

A review by Network Knowledge

Another review, by *Network Knowledge*, makes the following comments:

“WSEC/PBS Springfield will premiere a compelling two-part series entitled FRONTLINE - United States of Secrets. These programs go behind the headlines to reveal the dramatic story of how the U.S. government came to monitor and collect the communications of millions of people around the world - including ordinary Americans - and the lengths they went to trying to hide the massive surveillance program from the public.

“In part one, premiering Tuesday, May 13 at 8PM on WSEC/PBS Springfield, FRONTLINE filmmaker Michael Kirk goes inside Washington and the National Security Agency,

piecing together the secret history of the unprecedented surveillance program that began in the wake of September 11 and continues today even after the revelations of its existence by NSA contractor Edward Snowden.

“Then, in part two, premiering Tuesday, May 20 at 9PM, veteran FRONTLINE filmmaker Martin Smith continues the story, exploring the secret relationship between Silicon Valley and the National Security Agency, and investigating how the government and tech companies have worked together to gather and warehouse your data.

“Part political thriller and part spy novel, *United States of Secrets* series is the definitive history of domestic surveillance in a post 9/11 world. With new revelations about government spying coming out almost daily, the series will be gripping viewing for those who want to understand the context of the Snowden affair and what it means for all Americans.”

5.5 Censorship of the news

Many modern governments have become very expert in manipulating public opinion through mass media. They only allow the public to hear a version of the “news” that has been handed down by powerholders. Of course, people can turn to the alternative media that are available on the Internet. But on the whole, the vision of the world presented on television screens and in major newspapers is the “truth” that is accepted by the majority of the public, and it is this picture of events that influences political decisions. Censorship of the news by the power elite is a form of secrecy, since it withholds information that is needed for a democracy to function properly.

5.6 Coups, torture and illegal killing

During the period from 1945 to the present, the US interfered, militarily or covertly, in the internal affairs of a large number of nations: China, 1945-49; Italy, 1947-48; Greece, 1947-49; Philippines, 1946-53; South Korea, 1945-53; Albania, 1949-53; Germany, 1950s; Iran, 1953; Guatemala, 1953-1990s; Middle East, 1956-58; Indonesia, 1957-58; British Guiana/Guyana, 1953-64; Vietnam, 1950-73; Cambodia, 1955-73; The Congo/Zaire, 1960-65; Brazil, 1961-64; Dominican Republic, 1963-66; Cuba, 1959-present; Indonesia, 1965; Chile, 1964-73; Greece, 1964-74; East Timor, 1975-present; Nicaragua, 1978-89; Grenada, 1979-84; Libya, 1981-89; Panama, 1989; Iraq, 1990-present; Afghanistan 1979-92; El Salvador, 1980-92; Haiti, 1987-94; Yugoslavia, 1999; and Afghanistan, 2001-present, Syria, 2013-present; Egypt, 2013-present, and Ukraine, 2013-present. Most of these interventions were explained to the American people as being necessary to combat communism (or more recently, terrorism), but an underlying motive was undoubtedly the desire to put in place governments and laws that would be favorable to the economic interests of the US and its allies.

For the sake of balance, we should remember that during the Cold War period, the Soviet Union and China also intervened in the internal affairs of many countries, for ex-



Figure 5.9: **Extrajudicial killing of civilians by means of drones is also shrouded by secrecy, and it too is a gross violation of democratic principles.**

ample in Korea in 1950-53, Hungary in 1956, Czechoslovakia in 1968, and so on; another very long list. These Cold War interventions were also unjustifiable, like those mentioned above. Nothing can justify military or covert interference by superpowers in the internal affairs of smaller countries, since people have a right to live under governments of their own choosing even if those governments are not optimal.

Many people in Latin America and elsewhere have been tortured: The long history of CIA torture was recently investigated, but only small portions of the 6000-page report are available to the public. The rest remains secret.

Extrajudicial killing of civilians by means of drones is also shrouded by secrecy, and it too is a gross violation of democratic principles.²

5.7 Secret trade deals

The Trans-Pacific Partnership is one of the trade deals that is currently being negotiated in secret. Not even the US congress is allowed to know the details of the document. However, enough information has been leaked to make it clear that if the agreement is passed, foreign corporations would be allowed to “sue” the US government for loss of profits because of (for example) environmental regulations. The “trial” would be outside the legal system, before a tribunal of lawyers representing the corporations. A similar secret trade deal with Europe, the Trans-Atlantic Trade and Investment Partnership (TTIP), is also being “fast-tracked”. One can hardly imagine greater violations of democratic principles.³

²<http://www.globalresearch.ca/lawless-drone-killings/5355535>

³<http://www.citizen.org/Page.aspx?pid=5411>

<https://www.transcend.org/tms/2015/03/world-at-a-crossroads-stop-the-fast-track-to-a-future-of-global-corporate-rule/>

<http://talkingpointsmemo.com/livewire/princeton-experts-say-us-no-longer-democracy>

We can also consider the “non-discrimination” principle adopted by GATT (the General Agreement on Tariffs and Trade). This principle states that participating countries “cannot discriminate between like products on the basis of the method of production”. This single principle allows multinational commerce to escape from all the humanitarian and environmental reforms that have been achieved since the start of the Industrial Revolution. No matter if the method of production involves destruction of a tropical rain forest, no matter if forced labor was used, we are not allowed to discriminate “on the basis of the method of production”.

The present situation is that agriculture, trade and industry have become global, but the world still lacks adequate institutions at the global level to watch over what is happening and to ensure respect for human needs and respect for the natural environment. Today’s global economic interdependence, instantaneous worldwide communication, and the need for peaceful resolution of international conflicts all call for strong governmental institutions at the global level, but the United Nations today lacks many things that would be necessary if it is to perform such a role: It lacks a legislature with the power to make laws binding on individuals and corporations. It lacks mechanisms for enforcing such laws. And it lacks a large and dependable source of income.

It would be logical to improve the United Nations by giving it the things just mentioned, and by giving it at the same time the task of regulating multinational corporations to ensure that they act in a socially and ecologically responsible manner. It would also be logical to entitle the UN to a fee for acting as a referee in relationships between multinationals and the developing countries. These reforms must come someday because of the logic of our present situation. I hope that they will come soon.

The CEO’s of Wall Street call for less government, more deregulation and more globalization. They are delighted that the work of the reform movement is being undone in the name of “freedom”. But is this really what is needed? We need instead to reform our economic system and to give it both a social conscience and an ecological conscience. Governments already accept their responsibility for education. In the future they must also accept the responsibility for ensuring that their citizens can make a smooth transition from education to secure jobs. The free market alone cannot do this the powers of government are needed. Let us restore democracy! Let us have governments that work for the welfare of all their citizens, rather than for the enormous enrichment of the few!

5.8 Secrecy, democracy and nuclear weapons

Nuclear weapons were developed in secret. The decision to use them on the civilian populations of Hiroshima and Nagasaki in an already-defeated Japan was made in secret. Since 1945, secrecy has surrounded all aspects of nuclear weapons, and for this reason it is clear that they are essentially undemocratic.

Nuclear disarmament has been one of the core aspirations of the international community since the first use of nuclear weapons in 1945. A nuclear war, even a limited one, would have global humanitarian and environmental consequences, and thus it is a responsibility

of all governments, including those of non-nuclear countries, to protect their citizens and engage in processes leading to a world without nuclear weapons.

Now a new process has been established by the United Nations General Assembly, an Open Ended Working Group (OEWG) to Take Forward Multilateral Nuclear Disarmament Negotiations. The OEWG convened at the UN offices in Geneva on May 14, 2013. Among the topics discussed was a Model Nuclear Weapons Convention.

The Model Nuclear Weapons Convention prohibits development, testing, production, stockpiling, transfer, use and threat of use of nuclear weapons. States possessing nuclear weapons will be required to destroy their arsenals according to a series of phases. The Convention also prohibits the production of weapons usable fissile material and requires delivery vehicles to be destroyed or converted to make them non-nuclear capable.

Verification will include declarations and reports from States, routine inspections, challenge inspections, on-site sensors, satellite photography, radionuclide sampling and other remote sensors, information sharing with other organizations, and citizen reporting. Persons reporting suspected violations of the convention will be provided protection through the Convention including the right of asylum.

Thus we can see that the protection of whistleblowers is an integral feature of the Model Nuclear Weapons Convention now being discussed. As Sir Joseph Rotblat (1908-2005, Nobel Laureate 1995) frequently emphasized in his speeches, societal verification must be an integral part of the process of “going to zero” (i.e, the total elimination of nuclear weapons). This is because nuclear weapons are small enough to be easily hidden. How will we know whether a nation has destroyed all of its nuclear arsenal? We have to depend on information from insiders, whose loyalty to the whole of humanity prompts them to become whistleblowers. And for this to be possible, they need to be protected.

In general, if the world is ever to be free from the threat of complete destruction by modern weapons, we will need a new global ethic, an ethic as advanced as our technology. Of course we can continue to be loyal to our families, our localities and our countries. But this must be supplemented by a higher loyalty: a loyalty to humanity as a whole.

5.9 Freedom from fear

In order to justify secrecy, enormous dark branches of government and mass illegal spying, governments say: “We are protecting you from terrorism”. But terrorism is not a real threat, since our chances of dying from a terrorist attack are vanishingly small compared to (for example) preventable disease or an automobile accident. If we are ever to reclaim our democracy, we must free ourselves from fear.

5.10 *Inside Job*

Peter Bradshaw's review in *The Guardian*

"If you're growing, you're not in recession ... right?" The speaker is Hank Paulson, the former US treasury secretary, and, as it happens, the former CEO of Goldman Sachs. In Charles Ferguson's documentary about the great financial crash, Paulson's shrugging remark sums up the attitude of the super-rich banking apparatchiks and their eager political supporters. As long as the bubble's getting bigger, there's no worry about the bubble contracting ... right? But that is not what happens to bubbles. In 2008, the pop was heard around the world.

This film is as gripping as any thriller. Aided by some fascinating interviews, Ferguson lays out an awful story. In the 1980s, the markets and financial services were deregulated, and the driving force for this liberalisation was Alan Greenspan, formidable chairman of the US federal reserve board from 1987 to 2006. Banks and loan companies were freer to gamble with their depositors' money; they were themselves freer to borrow more; they were free to offer investors dizzyingly complex financial instruments, with income streams from different debts bundled up, including high-interest home loans offered to high-risk borrowers - the so-called "sub-prime" market that offered mouthwateringly high returns.

The good times rolled. The banks ballooned. They offered their traders mind-blowing bonuses to encourage risk-taking chutzpah, corporate loyalty, and a neurotically driven pursuit of profit. Ferguson argues that crucially, the banks were allowed to insure against bad debts with credit default swaps - any number of these insurance policies could be purchased against one particular risk. Chillingly, the banks now had a vested interest in selling insanely risky products, as they themselves were lavishly insured with these swaps.

Perhaps the most sensational aspect of this film is Ferguson's contention that the crash corrupted the discipline of economics itself. Distinguished economists from America's Ivy League universities were drafted in by banks to compose reports sycophantically supporting reckless deregulation. They were massively paid for these consultancies. The banks bought the prestige of the academics, and their universities' prestige, too. Ferguson speaks to many of these economists, who clearly thought they were going to be interviewed as wry, dispassionate observers. It is really something to see the expression of shock, outrage and fear on their faces as they realise they're in the dock. One splutters with vexation; another gives vent to a ripe Freudian slip. Asked by Ferguson if he has any regrets about his behaviour, he says: "I have no comments ... uh, no regrets."

This is what Ferguson means by "inside job". There is a revolving door between the banks and the higher reaches of government, and to some extent

the groves of academe. Bank CEOs become government officials, creating laws convenient for their once and future employers.

Perhaps only the pen of Tom Wolfe could do justice to these harassed, bald, middle-aged masters of the universe, as they appear in Ferguson's film. The director shows how their body-language is always the same: somehow more guilty-looking when they are in the White House rose garden in their career pomp, being introduced to the press, than when they are facing openly hostile Senate hearings. They look uneasy, shifty, in weirdly ill-fitting suits, as if they are oppressed by the scrutiny, and worn out, possibly, by the strain of suppressing their own scruples. Their financial capacity far outstrips their capacity for enjoying themselves. They look very unhappy. Occasionally, British figures including Mervyn King and Alistair Darling are to be glimpsed in these photos, reminding us that we Brits have been ardent deregulators, as well.

One of Ferguson's interviewees is Charles Morris, author of *The Two Trillion Dollar Meltdown*, who amusingly discusses the effects this mega-windfall has on the individual banker's mind. He became absurdly rich and "he thought it was because he was smart".

I was reminded of Michael Lewis's *Liar's Poker*, his very funny book about the financial mentality of the 80s boom. He noted that if a regular person won the lottery, he might roll around on the floor, kicking his legs up with glee, but when bankers won their arbitrary lottery, they instead became solemn, pompous, overwhelmed with their own importance and stateliness. Their recklessness and excess coexisted with an almost priestly sense of worth. Even more than rich lawyers, rich bankers felt that their money proved their superior cleverness and also moral worthiness as the generators of prosperity. Yet that prosperity didn't trickle down very far.

Generally, this is the sort of film that is praised because it is not as wacky and tricky as Michael Moore. Yet it is clearly influenced by him - it's like a Moore film with the gags and stunts removed. And it's worth noting that without Moore's pioneering work, this documentary could not have been made.

Once again, the phrase that comes to mind is Milton Friedman's: socialism for the rich, free enterprise for the rest. An ordinary person defaults on his debt, he gets to live in his car. A banker defaults, and the taxpayer can be relied on to bail him out. No wonder the bonuses are back. But what can be done about all this? Ferguson has no answers, other than a faintly unedifying hint that bankers could be brought low if rumours about their systemic addiction to drugs and prostitutes could be made to stick legally - like Al Capone's tax evasion. But only a new political mood for regulation will do, and this still seems far away.

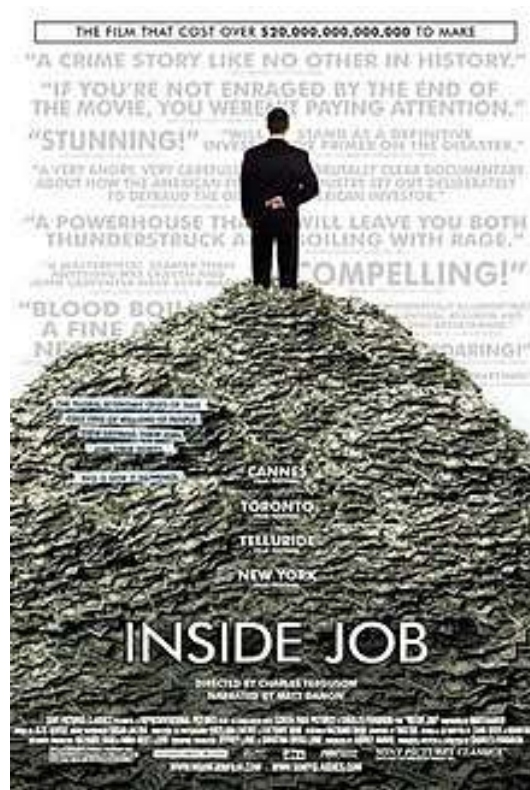


Figure 5.10: A poster advertising the Academy-Award-winning documentary film *Inside Job*.

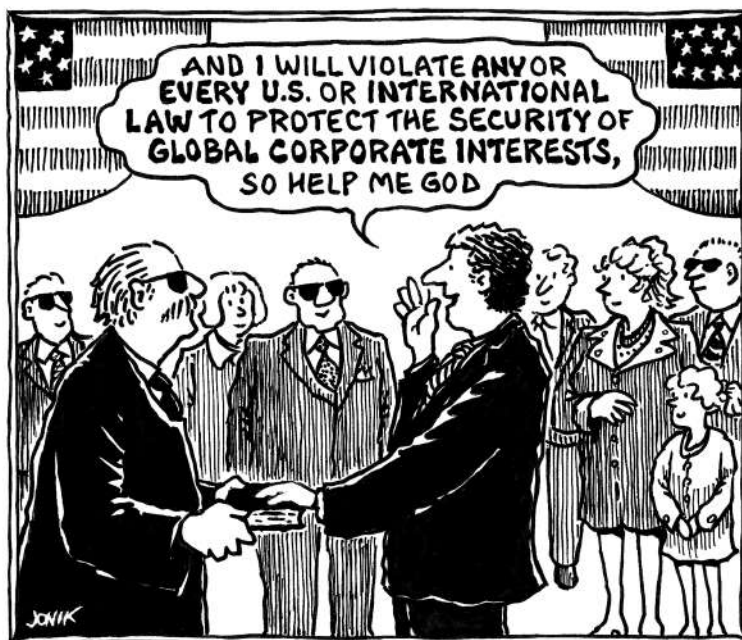


Figure 5.11: John Perkins was an economic hit man employed by the US Government. Image source: www.whale.to

5.11 *Confessions of an economic hit-man*

A book by John Perkins, “Confessions of an Economic Hit-Man”, can give us a good understanding of the way in which our present economic system operates to further enrich wealthy nations and impoverish poor ones. Here are some excerpts:

“Economic hit men (EHMs) are highly paid professionals who cheat countries around the globe out of trillions of dollars. They funnel money from the World Bank, the U.S. Agency for International Development (USAID), and other foreign ‘aid’ organizations into the coffers of huge corporations and the pockets of a few wealthy families who control the planet’s natural resources.”

“Their tools included fraudulent financial reports, rigged elections, payoffs, extortion, sex, and murder. They play a game as old as empire, but one that has taken on new and terrifying dimensions during this time of globalization. I was initially recruited while I was in business school back in the late sixties by the National Security Agency, the nation’s largest and least understood spy organization; but ultimately I worked for private corporations.”

“The first real economic hit man was back in the early 1950s, Kermit Roosevelt, Jr., the grandson of Teddy, who overthrew the government of Iran, a democratically elected government, Mossadegh’s government, who was Time magazine’s person of the year; and he was so successful at doing this without any bloodshed, well, there was a little bloodshed, but no military intervention, just spending millions of dollars and replaced Mossadegh with

the Shah of Iran.”

“At that point, we understood that this idea of economic hit man was an extremely good one. We didn’t have to worry about the threat of war with Russia when we did it this way. The problem with that was that Roosevelt was a C.I.A. agent. He was a government employee. Had he been caught, we would have been in a lot of trouble. It would have been very embarrassing. So, at that point, the decision was made to use organizations like the C.I.A. and the N.S.A. to recruit potential economic hit men like me and then send us to work for private consulting companies, engineering firms, construction companies, so that if we were caught, there would be no connection with the government.”⁴

Suggestions for further reading

1. Marc Ambinder and D.B. Grady, *Deep State: Inside the Government Secrecy Industry*, Wiley, (2013).
2. Michael J. Glennon *National Security and Double Government* (PDF), Harvard National Security Journal. 5, (2014).
3. Jordan Michael Smith. *Vote all you want. The secret government won't change*. The Boston Globe,(October 19, 2014).
4. Amanda Taub and Max Fisher, *As Leaks Multiply, Fears of a 'Deep State' in America*. The New York Times, (February 16, 2017).
5. Bob Jessop, *The State: Past, Present, Future*, John Wiley & Sons, (2015).
6. Jeremy Scahill, *Donald Trump and the Coming Fall of the American Empire*. The Intercept, (2017-07-22).
7. Alana Abramson, *President Trump's Allies Keep Talking About the 'Deep State.'* *What's That?*. Time, (8 March 2017).
8. Ishaan Tharoor, *Is Trump fighting the deep state or creating his own?*. The Washington Post, (February 1, 2017).
9. Michael Crowley, *The Deep State Is Real*. Politico Magazine, (September-October 2017).
10. Julie Hirschfeld Davis, *Rumblings of a 'Deep State' Undermining Trump? It Was Once a Foreign Concept*. The New York Times, (March 6, 2017).

⁴<http://techrig.blogspot.dk/2013/11/confessions-of-economic-hit-man.html>
<https://www.youtube.com/watch?v=yTbdnNgqfs8>
<https://en.wikipedia.org/wiki/Corporatocracy>

Chapter 6

THE MOST DANGEROUS ORGANIZATION IN HISTORY

6.1 Donald Trump's climate change denial

Why did Professor Noam Chomsky call the US Republican Party “The most dangerous organization in the history of the world”? In the primary that preceded the 2016 presidential election, every single Republican candidate with a chance of being nominated was a climate change denier. All received amazingly generous checks from giant fossil fuel organizations. When elected, Donald Trump not only pulled the United States out of the Paris Agreement; he also sabotaged the Environmental Protection Agency to such an extent that the carefully collected facts on climate change that the agency had accumulated had to be secretly saved by scientists to prevent their destruction by the Trump administration. Furthermore, Donald Trump not only subsidizes giant coal corporations. He also has sabotages renewable energy initiatives in the United States.

Here are some quotations from an article by Coral Davenport and Mark Landler, May 27, 2019¹:

President Trump has rolled back environmental regulations, pulled the United States out of the Paris climate accord, brushed aside dire predictions about the effects of climate change, and turned the term “global warming” into a punch line rather than a prognosis.

Now, after two years spent unraveling the policies of his predecessors, Mr. Trump and his political appointees are launching a new assault.

In the next few months, the White House will complete the rollback of the most significant federal effort to curb greenhouse-gas emissions, initiated during the Obama administration. It will expand its efforts to impose Mr. Trump's hard-line views on other nations, building on his retreat from the Paris accord and his recent refusal to sign a communiqué to protect the rapidly melting

¹<https://www.nytimes.com/2019/05/27/us/politics/trump-climate-science.html>



Figure 6.1: There is so much wrong with Donald Trump that one hardly knows where to start. He is a bully, braggart, narcissist, racist, mysogenist, habitual liar, and tax evader, in addition to being demonstrably ignorant. He has contempt for both domestic and international law, as well as for the US Constitution. In the words of Michael Moore, he is a “part-time clown and full-time sociopath”. However, it is Trump’s climate change denial, withdrawal from the Paris agreement, and sponsorship of fossil fuels that pose the greatest threats to the future of humans society and the biosphere. The general support of the Republican Party for the fossil fuel industry is the reason why Prof. Noam Chomsky has called the party “the most dangerous organization in history”. Burning of coal is responsible for a third of all greenhouse gas emissions.

Arctic region unless it was stripped of any references to climate change.

And, in what could be Mr. Trump’s most consequential action yet, his administration will seek to undermine the very science on which climate change policy rests.

Mr. Trump is less an ideologue than an armchair naysayer about climate change, according to people who know him. He came into office viewing agencies like the Environmental Protection Agency as bastions of what he calls the “deep state,” and his contempt for their past work on the issue is an animating factor in trying to force them to abandon key aspects of the methodology they use to try to understand the causes and consequences of a dangerously warming planet.

As a result, parts of the federal government will no longer fulfill what sci-

entists say is one of the most urgent jobs of climate science studies: reporting on the future effects of a rapidly warming planet and presenting a picture of what the earth could look like by the end of the century if the global economy continues to emit heat-trapping carbon dioxide pollution from burning fossil fuels...

The administration's prime target has been the National Climate Assessment, produced by an interagency task force roughly every four years since 2000. Government scientists used computer-generated models in their most recent report to project that if fossil fuel emissions continue unchecked, the earth's atmosphere could warm by as much as eight degrees Fahrenheit by the end of the century. That would lead to drastically higher sea levels, more devastating storms and droughts, crop failures, food losses and severe health consequences.

6.2 Jair Bolsonaro, the Trump of the Tropics

The newly elected President of Brazil, Jair Bolsonaro, has praised Pinochet, expressed support for torturers and called for political opponents to be shot, earning him the label of "the most misogynistic, hateful elected official in the democratic world". Bolsonaro speaks nostalgically about the country's 1964-1985 military dictatorship and has promised to fill his government with current and former military leaders. Here, in his own words, are some of his ideas:

On refugees: "The scum of the earth is showing up in Brazil, as if we didn't have enough problems of our own to sort out." (September 2015)

On gay people: "I would be incapable of loving a homosexual son. I'm not going to be a hypocrite: I'd rather my son died in an accident than showed up with some bloke with a moustache." (June 2011)

On democracy and dictatorship: "You'll never change anything in this country through voting. Nothing. Absolutely nothing. Unfortunately, things will only change when a civil war kicks off and we do the work the [military] regime didn't. Killing some 30,000... Killing them! If a couple of innocents die, that's OK." (May 1999)

On human rights: "I'm in favour of torture." (May 1999)

On women: "I said I wouldn't rape you because you don't deserve it." (December 2014, to politician Maria do Rosário, repeating a comment first made to her in 2003).

Indigenous rights activists fear Bolsonaro's avowed plan to wring riches from the Amazon - whether from expanding agriculture into indigenous lands, building roads and other



Figure 6.2: Jair Bolsonaro visiting Donald Trump in Washington. Like Trump, he is an utterly despicable person, but (again like Trump) his worst crime is against the future of human civilization and the biosphere. Under Bolsonaro, the vitally important Amazon rainforests are being destroyed, a terrible blow to our efforts to avoid catastrophic ciliate change.



Figure 6.3: The indigenous peoples of the Amazon are the guardians of the lungs of Planet Earth. Within hours of taking office on 1 January, 2019, the Trump of the Tropics, aka the new President of Brazil, Jair Bolsonaro, launched an all-out assault against the Amazon rainforest and its indigenous communities, potentially paving the way for large scale deforestation by agricultural, mining and oil companies.

infrastructure projects, or allowing mining on public lands - will unleash a tide of violence and environmental devastation.

“All indigenous communities are afraid right now,” says Felipe Milanez, professor of humanities at the Universidade Federal de Bahia. “There is a risk of brutal, violent attack.” Milanez fears that indigenous efforts to patrol and protect their own lands from outsiders, such as the Forest Guardians recently covered in *National Geographic* magazine, will be banned and persecuted.

“His economic project is to destroy the Amazon, to transform the Amazon into commodities for export,” Milanez says.

Human rights activists are concerned that a surge in violent land conflicts will accompany an increase in environmentally destructive development in the Amazon. “There is no doubt that devastation will spread in the region,” says Diogo Cabral, an attorney with the Sociedade Maranhense de Direitos Humanos. “At the same time, he aims to extinguish policies that protect human rights defenders in Brazil. Under Bolsonaro, human life will

have no value.”

The indigenous peoples’ website Mongabay ² states that “The potentially resulting wholesale deforestation could be a disaster to indigenous peoples, biodiversity, and even the regional and global climate.”

It adds: “Bolsonaro’s proposed Amazon policies, if carried out, could ultimately help dash the world’s hopes of achieving the global climate goals agreed to in Paris, a failure that could lead to climate chaos.”

Leading Brazilian researchers, from the National Institute of Space Research (INPE), have calculated that Bolsonaro’s policies could triple deforestation in the Amazon from present levels of 6,900 square kilometers (2,664 square miles) annually, to 25,600 square kilometers (9,884 square miles) per year by 2020.

6.3 The Evangelicals believe that there is no need to act

Here is an excerpt from an article by Bernard Daley Zaleha and Andrew Szasz entitled *Why conservative Christians don’t believe in climate change*³:

American Christians have become increasingly polarized on issues of climate change and environmental regulation. In recent years, mainline Protestant denominations and the Roman Catholic Church have made explicit declarations of support for global climate action. Prominent Southern Baptists and other evangelical Protestants, on the other hand, have issued statements that are strikingly similar to the talking points of secular climate skeptics, and have attempted to stamp out “green” efforts within their own ranks. An analysis of resolutions and campaigns by evangelicals over the past 40 years shows that anti-environmentalism within conservative Christianity stems from fears that “stewardship” of God’s creation is drifting toward neo-pagan nature worship, and from apocalyptic beliefs about “end times” that make it pointless to worry about global warming. As the climate crisis deepens, the moral authority of Christian leaders and organizations may play a decisive role in swaying public policy toward (or away from) action to mitigate global warming.

The highly dangerous beliefs of the Evangelicals are in strong contrast to the courageous and enlightened leadership of Pope Francis, who urges us to act resolutely to prevent catastrophic climate change.

²<https://news.mongabay.com/2019/01/bolsonaro-hands-over-indigenous-land-demarcation-to-agriculture-ministry/?fbclid=IwAR3UG-jneDheuddVEWVcCrcWKk4bnnsdE1uIBMLlnLtS6zGqMmGSPxtgEzM>

³Bulletin of the Atomic Scientists 2015, Vol. 71(5) 19-30

6.4 Banks give fossil fuel giants \$1.9 trillion since Paris

Banking on Climate Change 2019 - Fossil Fuel Report Card / : Alison Kirsch et al Rainforest Action Network (RAN) et al.. For the first time, this report adds up lending and underwriting from 33 global banks to the fossil fuel industry as a whole. The findings are stark: these Canadian, Chinese, European, Japanese, and U.S. banks have financed fossil fuels with \$1.9 trillion since the Paris Agreement was adopted (2016-2018), with financing on the rise each year. This report finds that fossil fuel financing is dominated by the big U.S. banks, with JPMorgan Chase as the world's top funder of fossil fuels by a wide margin. In other regions, the top bankers of fossil fuels are Royal Bank of Canada in Canada, Barclays in Europe, MUFG in Japan, and Bank of China in China. Here are some quotations from the report:

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) released a sobering report on the devastating impacts our world will face with 1.5° Celsius of warming - let alone 2°C - while setting out the emissions trajectory the nations of the world need to take if we are to have any shot at keeping to that 1.5°C limit. This 10th edition of the annual fossil fuel finance report card, greatly expanded in scope, reveals the paths banks have taken in the past three years since the Paris Agreement was adopted, and finds that overall bank financing continues to be aligned with climate disaster.

For the first time, this report adds up lending and underwriting from 33 global banks to the fossil fuel industry as a whole. The findings are stark: these Canadian, Chinese, European, Japanese, and U.S. banks have financed fossil fuels with \$1.9 trillion since the Paris Agreement was adopted (2016-2018), with financing on the rise each year. This report finds that fossil fuel financing is dominated by the big U.S. banks, with JPMorgan Chase as the world's top funder of fossil fuels by a wide margin. In other regions, the top bankers of fossil fuels are Royal Bank of Canada in Canada, Barclays in Europe, MUFG in Japan, and Bank of China in China.

This report also puts increased scrutiny on the banks' support for 100 top companies that are expanding fossil fuels, given that there is no room for new fossil fuels in the world's carbon budget. And yet banks supported these companies with \$600 billion in the last three years. JPMorgan Chase is again on top, by an even wider margin, and North American banks emerge as the biggest bankers of expansion as well.

This report also grades banks' overall future-facing policies regarding fossil fuels, assessing them on restrictions on financing for fossil fuel expansion and commitments to phase out fossil fuel financing on a 1.5°C-aligned trajectory. While some banks have taken important steps, overall major global banks have simply failed to set trajectories adequate for dealing with the climate crisis.

As in past editions, this fossil fuel finance report card also assesses bank policy and practice around financing in certain key fossil fuel subsectors, with





league tables and policy grades on:

- **Tar sands oil:** RBC, TD, and JPMorgan Chase are the biggest bankers of 30 top tar sands producers, plus four key tar sands pipeline companies. In particular, these banks and their peers support companies working to expand tar sands infrastructure, such as Enbridge and Teck Resources.
- **Arctic oil and gas:** JPMorgan Chase is the world's biggest banker of Arctic oil and gas by far, followed by Deutsche Bank and SMBC Group. Worryingly, financing for this subsector increased from 2017 to 2018.
- **Ultra-deepwater oil and gas:** JPMorgan Chase, Citi, and Bank of America are the top bankers here. Meanwhile, none of the 33 banks have policies to proactively restrict financing for ultra-deepwater extraction.
- **Fracked oil and gas:** For the first time, the report card looks at bank support for top fracked oil and gas producers and transporters - and finds financing is on the rise over the past three years. Wells Fargo and JPMorgan Chase are the biggest bankers of fracking overall - and, in particular, they support key companies active in the Permian Basin, the epicenter of the climate-threatening global surge of oil and gas production.
- **Liquefied natural gas (LNG):** Banks have financed top companies building LNG import and export terminals around the world with \$46 billion since the Paris Agreement, led by JPMorgan Chase, Société Générale, and SMBC Group. Banks have an opportunity to avoid further damage by not financing Anadarko's Mozambique LNG project, in particular.
- **Coal mining:** Coal mining finance is dominated by the four major Chinese banks, led by China Construction Bank and Bank of China. Though many European and U.S. banks have policies in place restricting financing for coal mining, total financing has only fallen by three to five percentage points each year.
- **Coal power:** Coal power financing is also led by the Chinese banks - Bank of China and ICBC in particular - with Citi and MUFG as the top non-Chinese bankers of coal power. Policy grades for this subsector show some positive examples of European banks restricting financing for coal power companies.

The human rights chapter of this report shows that as fossil fuel companies are increasingly held accountable for their contributions to climate change, finance for these companies also poses a growing liability risk for banks. The fossil fuel industry has been repeatedly linked to human rights abuses, including violations of the rights of Indigenous peoples and at-risk communities, and



Figure 6.4: Drilling for oil in the Arctic.

continues to face an ever-growing onslaught of lawsuits, resistance, delays, and political uncertainty.

The IPCC's 2018 report on the impacts of a 1.5°C increase in global temperature showed clearly the direction the nations of the world need to take, and the emissions trajectory we need to get there. Banks must align with that trajectory by ending financing for expansion, as well as for these particular spotlight fossil fuels - while committing overall to phase out all financing for fossil fuels on a Paris Agreement-compliant timeline.



Figure 6.5: Indigenous protests against Arctic drilling.







Figure 6.6: A coal-fired power plant.

6.5 Fossil fuel industry's disinformation campaign

The Wikipedia article on climate change denial describes it with the following words: “Although scientific opinion on climate change is that human activity is extremely likely to be the primary driver of climate change, the politics of global warming have been affected by climate change denial, hindering efforts to prevent climate change and adapt to the warming climate. Those promoting denial commonly use rhetorical tactics to give the appearance of a scientific controversy where there is none.”

It is not surprising that the fossil fuel industry supports, on a vast scale, politicians and mass media that deny the reality of climate change. The amounts of money at stake are vast. If catastrophic climate change is to be avoided, coal, oil and natural gas “assets” worth trillions of dollars must be left in the ground. Giant fossil fuel corporations are desperately attempting to turn these “assets” into cash.

According to a recent article published in “The Daily Kos”⁴, companies like Shell and Exxon, knew, as early as the 1970s, how their combustible products were contributing to irreversible warming of the planet, became public knowledge over the last few years.

A series of painstakingly researched articles⁵ published in 2015 by the Pulitzer-prize

⁴www.dailykos.com/stories/2018/9/23/1797888/-The-Oil-Companies-not-only-knew-fossil-fuels-caused-climate-change-they-knew-how-bad-it-would-get?detail=emaildkre

⁵<https://insideclimatenews.org/news/15092015/Exxons-own-research-confirmed-fossil-fuels-role-in-global-warming>

winning Inside Climate News revealed an industry totally aware and informed for decades about the inevitable warming certain to occur as more and more carbon dioxide from the burning of fossil fuels was released into the atmosphere.

The article states that “In fact, the oil industry, and Exxon in particular, had the best climate models available, superior to those relied on by scientific community.⁶ And armed with the foreknowledge developed through those models, Exxon and the other oil companies planned and executed an elaborate, cynical long term strategy: to invest hundreds of millions of dollars in a comprehensive propaganda effort designed to raise doubts about the existence and cause of climate change, a phenomenon they well knew was irrefutable, based on their own research. By 2016 the industry’s lobbying to discredit the science of climate change had surpassed two billion dollars.

“Meanwhile, as newly discovered documents reported in The Guardian⁷ attest, the same companies were preparing projections of what type of world they would be leaving for the rest of humanity. In the 1980s, oil companies like Exxon and Shell carried out internal assessments of the carbon dioxide released by fossil fuels, and forecast the planetary consequences of these emissions. In 1982, for example, Exxon predicted that by about 2060, CO₂ levels would reach around 560 parts per million - double the preindustrial level - and that this would push the planet’s average temperatures up by about 2°C over then-current levels (and even more compared to pre-industrial levels).”⁸

The Fossil Free MIT report, 2014

Here are some excerpts from a report entitled “**The Fossil Fuel Industry’s Role in Hindering Climate Change Action: Lobbying and Disinformation Against Science and Scientists**”⁹:

In response to the unprecedented urgency of global climate change, Fossil Free MIT’s petition, signed by more than 2,400 MIT members, is calling on MIT to divest its \$11 billion endowment from the 200 fossil fuel companies with the world’s largest publicly traded carbon reserves.

⁶<https://insideclimatenews.org/news/18092015/exxon-confirmed-global-warming-consensus-in-1982-with-in-house-climate-models>

⁷<https://www.theguardian.com/environment/climate-consensus-97-per-cent/2018/sep/19/shell-and-exxons-secret-1980s-climate-change-warnings>

⁸See also <https://truthout.org/articles/self-immolation-as-the-world-burns-an-earth-day-report/>
<https://countercurrents.org/2018/04/29/the-methane-time-bomb-and-the-future-of-the-biosphere/>
<https://countercurrents.org/2018/08/07/hothouse-earth-evidence-for-ademise-of-the-planetary-life-support-system/>
<https://www.independent.co.uk/environment/global-warming-temperature-rise-climate-change-end-century-science-a8095591.html>
<http://www.lifeworth.com/deepadaptation.pdf>
<https://www.independent.co.uk/news/business/news/bp-shell-oil-global-warming-5-degree-paris-climate-agreement-fossil-fuels-temperature-rise-a8022511.html>

⁹<https://www.fossilfreemit.org/wp-content/uploads/2014/08/FossilFreeMIT-Lobbying-Disinformation.pdf>

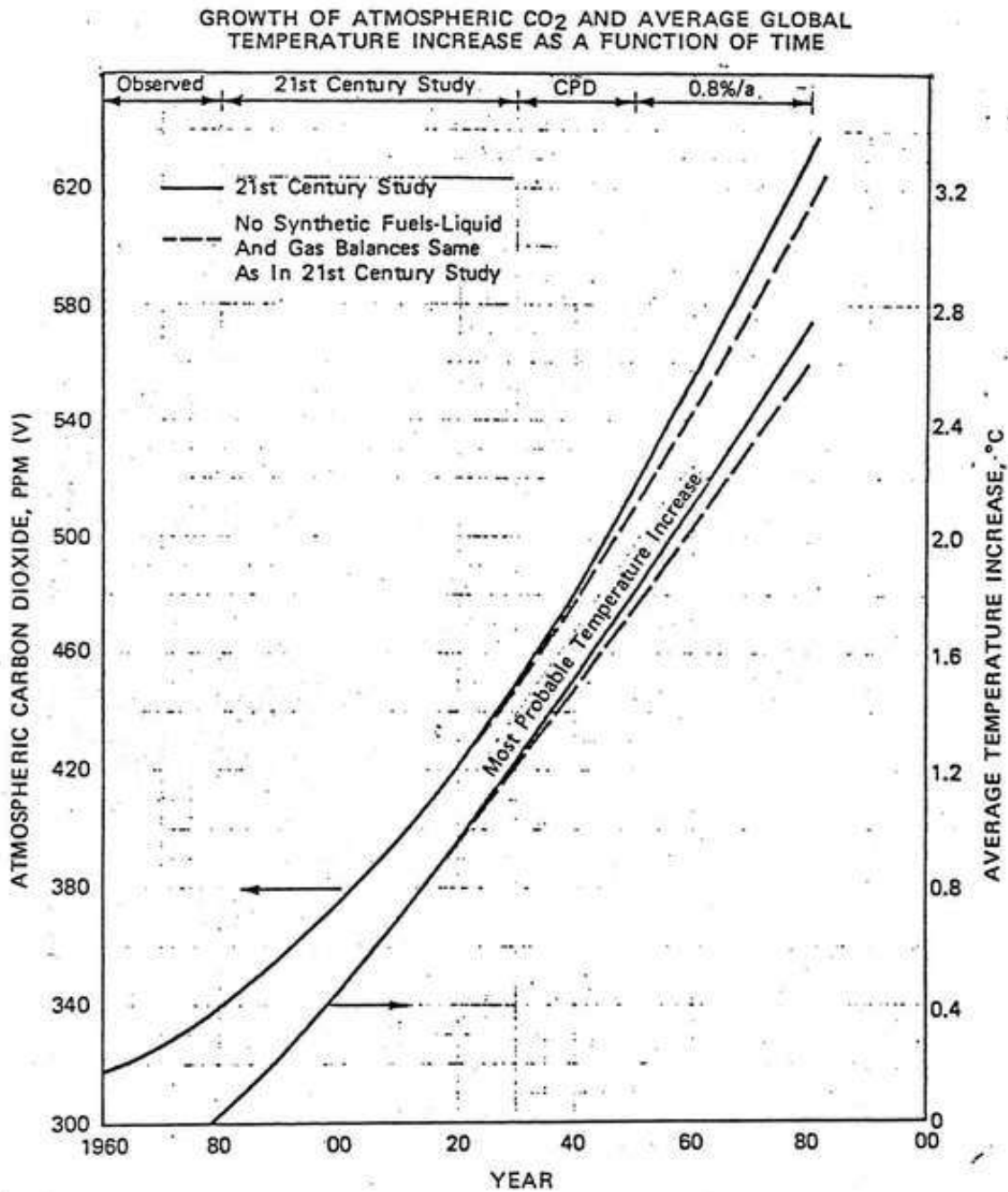


Figure 6.7: Exxon's 1982 internal projections of the future increase in carbon dioxide levels shows CO₂ percentages increasing to 600 ppm and temperature increases of up to 3°C.

Fossil Free MIT believes that divestment from the fossil fuel industry presents MIT with a unique opportunity to lead the global effort to combat climate change. We wholeheartedly support our Institute's cutting-edge climate science and renewable energy technology research, as well as MIT's campus sustainability initiatives, and we propose divestment as a highly complementary strategy that will bring MIT's investments in line with the goals of its research and sustainability activities. There are three central reasons why we urge MIT to divest from the fossil fuel industry:

- The fossil fuel industry's business practice is fundamentally inconsistent with the science of climate change mitigation. A 66% chance of limiting global warming to less than 2°C above pre-industrial temperatures demands that no more than 35% of proven fossil fuel reserves can be burned prior to 2100. Yet in 2012, the fossil fuel industry spent \$674 billion developing new reserves.
- The fossil fuel industry spends hundreds of millions of dollars lobbying and donating in Washington, D.C. against legislation for climate change action.
- Many fossil fuel companies are responsible for funding or orchestrating targeted anti-science disinformation campaigns that confuse the public, sabotage science, and slander scientists.

Disinformation from fossil fuel and tobacco industries

Here are some excerpts from a February 19 2019 article by Mat Hope entitled “**Revealed: How the Tobacco and Fossil Fuel Industries Fund Disinformation Campaigns Around the World**”¹⁰:

Fossil fuel companies have a long history of adopting public relations strategies straight from the tobacco industry's playbook. But a new analysis shows the two industries' relationship goes much deeper - right down to funding the same organizations to do their dirty work.

MIT Associate Professor David Hsu analyzed organizations in DeSmog's disinformation database and the Guardian's tobacco database and found 35 thinktanks based in the US, UK, Australia, and New Zealand that promote both the tobacco and fossil fuel industries' interests.

Of these organizations, DeSmog can reveal that 32 have taken direct donations from the tobacco industry, 29 have taken donations from the fossil fuel industry, and 28 have received money from both. Two key networks, based

¹⁰<https://www.desmogblog.com/2019/02/19/how-tobacco-and-fossil-fuel-companies-fund-disinformation-campaigns-around-world>



Figure 6.8: Smoke destroys human health, regardless of whether it is from cigarettes or coal-fired power plants. Fossil fuel corporations and tobacco companies have exhibited an astonishing degree of cynicism and lack of social responsibility.

around the Koch brothers and Atlas Network, are involved in coordinating or funding many of the thinktanks.

6.6 The UK declares a climate emergency

Introducing the motion in the House of Commons, Labour leader Jeremy Corbyn said: “We have no time to waste. We are living in a climate crisis that will spiral dangerously out of control unless we take rapid and dramatic action now. This is no longer about a distant future. We’re talking about nothing less than the irreversible destruction of the environment within our lifetimes of members of this house.”

Here are some excerpts from an article by Amy Goodman and Nermeen Shaikh of Democracy now published in Truthout on May 2, 2019.¹¹:

On Wednesday, the House of Commons became the first parliament in the world to declare a climate emergency. The resolution came on the heels of the recent Extinction Rebellion mass uprising that shut down Central London last month in a series of direct actions. Activists closed bridges, occupied public landmarks and even superglued themselves to buildings, sidewalks and trains

¹¹<https://truthout.org/video/george-monbiot-on-the-uk-climate-emergency/>



to demand urgent action to combat climate change. Police arrested more than 1,000 protesters. Labour Party Leader Jeremy Corbyn told Parliament, “We are witnessing an unprecedented upsurge of climate activism, with groups like Extinction Rebellion forcing the politicians in this building to listen. For all the dismissive and defensive column inches the processes have provoked, they are a massive and, I believe, very necessary wake-up call. Today we have the opportunity to say, ‘We hear you.’” We speak with George Monbiot, British journalist, author and columnist with *The Guardian*. His recent piece for *The Guardian* is headlined “Only rebellion will prevent an ecological apocalypse.” Monbiot says capitalism “is like a gun pointed at the heart of the planet. It will essentially, necessarily destroy our life-support systems. Among those characteristics is the drive for perpetual economic growth on a finite planet.”

6.7 The 2018 IPCC report

Excerpts from an article summarizing the report

Here are excerpts from an article entitled **UN Experts Warn of ‘Climate Catastrophe’ by 2040** by Jesica Corbett. The article was published in *Common Dreams* on Monday, October 8, 2018.¹²:

¹²<https://www.commondreams.org/news/2018/10/08/un-experts-warn-climate-catastrophe-2040-without-rapid-and-unprecedented-global>

“The climate crisis is here and already impacting the most vulnerable,” notes 350.org’s program director. “Staying under 1.5°C is now a matter of political will.”

Underscoring the need for “rapid, far-reaching, and unprecedented” changes to life as we know it to combat the global climate crisis, a new report from the Intergovernmental Panel on Climate Change (IPCC) - the United Nations’ leading body for climate science - details what the world could look like if the global temperature rises to 1.5°C versus 2°C (2.7°F versus 3.6°F) above pre-industrial levels, and outlines pathways to reducing greenhouse gas emissions in the context of sustainable development and efforts to eradicate poverty.

“Climate change represents an urgent and potentially irreversible threat to human societies and the planet,” the report reads. “Human-induced warming has already reached about 1°C (1.8°F) above pre-industrial levels at the time of writing of this Special Report... If the current warming rate continues, the world would reach human-induced global warming of 1.5°C around 2040.”

Approved by the IPCC in South Korea on Saturday ahead of COP24 in Poland in December, *Global Warming of 1.5°C* was produced by 91 authors and reviewers from 40 countries. Its release has elicited calls to action from climate campaigners and policymakers the world over.

“This is a climate emergency. The IPCC 1.5 report starkly illustrates the difference between temperature rises of 1.5°C and 2°C - for many around the world this is a matter of life and death,” declared Karin Nansen, chair of Friends of the Earth International (FOEI). “It is crucial to keep temperature rise well below 1.5 degrees ... but the evidence presented by the IPCC shows that there is a narrow and shrinking window in which to do so.”

The report was requested when the international community came together in December of 2015 for the Paris agreement, which aims to keep global warming within this century “well below” 2°C, with an ultimate target of 1.5°C. President Donald Trump’s predecessor supported the accord, but Trump has vowed to withdraw the United States, even as every other nation on the planet has pledged their support for it. In many cases, however, sworn support hasn’t led to effective policy.

“It’s a fresh reminder, if one was needed, that current emissions reduction pledges are not enough to meet the long-term goals of the Paris agreement. Indeed, they are not enough for any appropriately ambitious temperature target, given what we know about dangerous climate impacts already unfolding even at lower temperature thresholds,” Rachel Cleetus, lead economist and climate policy manager for the Union of Concerned Scientists (UCS), wrote ahead of its release.

“The policy implications of the report are obvious: We need to implement a suite of policies to sharply limit carbon emissions and build climate resilience, and we must do all this in a way that prioritizes equitable outcomes particularly for the world’s poor and marginalized communities,” Cleetus added.

“We want a just transition to a clean energy system that benefits people not corporations,” Nansen emphasized. “Only with a radical transformation of our energy, food and economic systems, embracing environmental, social, gender and economic justice, can we prevent climate catastrophe and temperature rises exceeding 1.5°C.”

Today we are faced with multiple interrelated crises, for example the threat of catastrophic climate change or equally catastrophic thermonuclear war, and the threat of widespread famine. These threats to human existence and to the biosphere demand a prompt and rational response; but because of institutional and cultural inertia, we are failing to take the steps that are necessary to avoid disaster.

6.8 Greta Thunberg

Only immediate climate action can save the future

Immediate action to halt the extraction of fossil fuels and greatly reduce the emission of CO₂ and other greenhouse gasses is needed to save the long-term future of human civilization and the biosphere.

At the opening ceremony of United Nations-sponsored climate talks in Katowice, Poland, Sir David Attenborough said “Right now, we are facing a man-made disaster of global scale. Our greatest threat in thousands of years. Climate change. If we don’t take action, the collapse of our civilizations and the extinction of much of the natural world is on the horizon. The world’s people have spoken. Their message is clear. Time is running out. They want you, the decision-makers, to act now.”

Antonio Guterres, UN Secretary-General, said climate change was already “a matter of life and death” for many countries. He added that the world is “nowhere near where it needs to be” on the transition to a low-carbon economy.

Swedish student Greta Thunberg, is a 16-year-old who has launched a climate protest movement in her country. She said, in a short but very clear speech after that of UN leader Antonio Guterres: “Some people say that I should be in school instead. Some people say that I should study to become a climate scientist so that I can ‘solve the climate crisis’. But the climate crisis has already been solved. We already have all the facts and solutions.”

She added: “Why should I be studying for a future that soon may be no more, when no one is doing anything to save that future? And what is the point of learning facts when the most important facts clearly mean nothing to our society?”

Thunberg continued: “Today we use 100 million barrels of oil every single day. There are no politics to change that. There are no rules to keep that oil in the ground. So we can’t save the world by playing by the rules. Because the rules have to be changed.”

She concluded by saying that “since our leaders are behaving like children, we will have to take the responsibility they should have taken long ago.”

Appearing among billionaires, corporate CEO’s and heads of state at the Davos Economic Forum in Switzerland, like a new Joan of Arc, 16-year-old Swedish climate activist

Greta Thunberg called on decision-makers to fulfil their responsibilities towards future generations. Here are some excerpts from her speech:

Greta's speech at Davos

Our house is on fire. I am here to say, our house is on fire. According to the IPCC, we are less than 12 years away from not being able to undo our mistakes. In that time, unprecedented changes in all aspects of society need to have taken place, including a reduction of our CO₂ emissions by at least 50%...

Here in Davos - just like everywhere else - everyone is talking about money. It seems money and growth are our only main concerns.

And since the climate crisis has never once been treated as a crisis, people are simply not aware of the full consequences on our everyday life. People are not aware that there is such a thing as a carbon budget, and just how incredibly small that remaining carbon budget is. That needs to change today.

No other current challenge can match the importance of establishing a wide, public awareness and understanding of our rapidly disappearing carbon budget, that should and must become our new global currency and the very heart of our future and present economics.

We are at a time in history where everyone with any insight of the climate crisis that threatens our civilization - and the entire biosphere - must speak out in clear language, no matter how uncomfortable and unprofitable that may be.

We must change almost everything in our current societies. The bigger your carbon footprint, the bigger your moral duty. The bigger your platform, the bigger your responsibility.



Figure 6.9: Greta Thunberg on the cover of Time Magazine, The Intergovernmental Panel on Climate Change, in their October 2018 report, used strong enough language to wake up at least part of the public: the children whose future is at stake. Here is an excerpt from a speech which 16-year-old Swedish climate activist Greta Thunberg made at the Davos Economic Forum in January, 2019: “Our house is on fire. I am here to say, our house is on fire. According to the IPCC, we are less than 12 years away from not being able to undo our mistakes. In that time, unprecedented changes in all aspects of society need to have taken place, including a reduction of our CO₂ emissions by at least 50%...”

6.9 Worldwide school strike, 15 March, 2019

Inspired by Greta Thunberg, over 1.4 million young students across all continents took to the streets on Friday March 15th for the first ever global climate strike. Messages in more than 40 languages were loud and clear: world leaders must act now to address the climate crisis and save our future. The school strike was the largest climate action in history. Nevertheless it went almost unmentioned in the media,

Here are some of the statements by the students explaining why they took part in the strikes:

In India, no one talks about climate change. You don't see it on the news or in the papers or hear about it from government. We want global leaders to declare a climate emergency. If we don't act today, then we will have no tomorrow. - Vidit Baya, 17, Udaipur, India.

We face heartbreaking loss due to increasingly extreme weather events. We urge the Taiwanese government to implement mitigation measures and face up to the vulnerability of indigenous people, halt construction projects in the indigenous traditional realm, and recognize the legal status of Plains Indigenous People, in order to implement environmental protection as a bottom-up approach - Kaisanan Ahuan, Puli City, Taiwan.

We have reached a point in history when we have the technical capacities to solve poverty, malnutrition, inequality and of course global warming. The deciding factors for whether we take advantage of our potential will be our activism, our international unity and our ability to develop the art of making the impossible possible. Whether we succeed or not depends on our political will - Eyal Weintraub, 18, and Bruno Rodriguez, 18, Argentina.

The damage done by multinationals is enormous: the lack of transparency, dubious contracts, the weakening of the soil, the destruction of flora and fauna, the lack of respect for mining codes, the contamination of groundwater. In Mali, the state exercises insufficient control over the practices of the multinationals, and it is us, the citizens, who suffer the consequences. The climate alarm has sounded, and the time has come for us all to realize that there is still time to act locally, in our homes, our villages, our cities - Mone Fousseny, 22, Mali.

6.10 Forms of renewable energy

Solar energy

Before the start of the industrial era, human society relied exclusively on renewable energy sources - but can we do so again, with our greatly increased population and greatly increased demands? Will we ultimately be forced to reduce the global population or our per capita use of energy, or both? Let us now try to examine these questions.

Biomass, wind energy, hydropower and wave power derive their energy indirectly from the sun, but in addition, various methods are available for utilizing the power of sunlight directly. These include photovoltaic panels, solar designs in architecture, solar systems for heating water and cooking, concentrating photovoltaic systems, and solar thermal power plants.

Photovoltaic cells and concentrating photovoltaic systems

Solar power was the fastest-growing source of new energy in 2016, surpassing the net growth of all other energy sources including coal, according to a new report from the International Energy Agency (IEA).

The IEA report found new solar capacity increased by 50 percent in 2016, and IEA executive director Fatih Birol hailed solar's rapid growth. "What we are witnessing is the birth of a new era in solar photovoltaics [PV]. We expect that solar PV capacity growth will be higher than any other renewable technology up to 2022."¹³

The report also shows renewables as a whole accounted for two-thirds of all new energy capacity in 2016. "We see renewables growing by about 1,000 GW (gigawatts) by 2022, which equals about half of the current global capacity in coal power, which took 80 years to build," Birol said in a statement accompanying the report.¹⁴

Solar photovoltaic cells¹⁵ are thin coated wafers of a semiconducting material (usually silicon). The coatings on the two sides are respectively charge donors and charge acceptors. Cells of this type are capable of trapping solar energy and converting it into direct-current electricity. The electricity generated in this way can be used directly (as it is, for example, in pocket calculators) or it can be fed into a general power grid. Alternatively it can be used to split water into hydrogen and oxygen. The gases can then be compressed and stored, or exported for later use in fuel cells. In the future, we may see solar photovoltaic arrays in sun-rich desert areas producing hydrogen as an export product. As their petroleum reserves become exhausted, the countries of the Middle East and Africa may be able to shift to this new technology and still remain energy exporters.

¹³<https://www.theguardian.com/environment/2017/oct/04/solar-power-renewables-international-energy-agency>

¹⁴<https://www.iea.org/newsroom/news/2017/october/solar-pv-grew-faster-than-any-other-fuel-in-2016-opening-a-new-era-for-solar-pow.html>

¹⁵<https://www.iea.org/renewables/>

It is interesting to notice that the primary process of photosynthesis in plants is closely similar to the mechanism by which solar cells separate charges and prevent the back-reaction. We can see why a back-reaction must be prevented if we consider the excitation of a single atom. An absorbed photon lifts an electron from a filled atomic orbital to an empty one, leaving a positively-charged hole in the orbital from which the electron came. However, a back-reaction occurs almost immediately: The excited electron falls back into the orbital from which it came, and the absorbed energy is re-emitted. One can say that the electron and hole have recombined.

In higher plants, the back reaction is prevented because the photon is absorbed in a membrane which has a sandwich-like structure. Dye molecules (usually chlorophyll molecules) are sandwiched between a layer of charge donor molecules on one side of the membrane, and a layer of charge acceptor molecule on the other side. The electron quickly migrates to the acceptors, which are molecules with low-lying unfilled orbitals. Meanwhile the hole has quickly moved to the opposite side of the membrane, where it combines with an electron from a donor molecule. A donor molecule is a molecule whose highest filled orbital is high in energy. In this process, the back-reaction is prevented. The electron and hole are on opposite sides of the membrane, and they can only recombine after they have driven the metabolism of the plant.

In a photovoltaic solar cell, the mechanism by which the back-reaction is prevented is exactly similar. It too has a sandwich-like structure, with charge donors on one side, charge-acceptors on the other, and photon absorbers in the middle. Here too, the electron and hole quickly migrate to opposite sides. They can only recombine by traveling through the external circuit, which is analogous to a plant's metabolism, and performing useful work.

The cost of manufacturing photovoltaics continues to fall rapidly. In 2017, a homeowner paid approximately \$3,360 per kilowatt to have rooftop solar panels installed. Usually photovoltaic panels are warranted for a life of 20 years, but they are commonly still operational after 30 years or more. Using the fact that there are 8760 hours in a year, and thus 175200 hours in 20 years, we can calculate that the cost of electricity to a solar-using homeowner today is about 1.92 cents per kilowatt hour. This can be compared with electricity generated from coal, which in 2011 cost 3.23 cents per kilowatt hour, while electricity generated from natural gas cost 4.51 cents per kilowatt hour. We must also remember that photovoltaics are falling rapidly in price, and that the fossil fuel costs do not include externalities, such as their contribution to climate change.

Concentrating photovoltaic systems are able to lower costs still further by combining silicon solar cells with reflectors that concentrate the sun's rays. The most inexpensive type of concentrating reflector consists of a flat piece of aluminum-covered plastic material bent into a curved shape along one of its dimensions, forming a trough-shaped surface. (Something like this shape results when we hold a piece of paper at the top and bottom with our two hands, allowing the center to sag.) The axis of the reflector can be oriented so that it points towards the North Star. A photovoltaic array placed along the focal line will then receive concentrated sunlight throughout the day.

Photovoltaic efficiency is defined as the ratio of the electrical power produced by a cell

to the solar power striking its surface. For commercially available cells today, this ratio is between 9% and 14%. If we assume 5 hours of bright sunlight per day, this means that a photo cell in a desert area near to the equator (where 1 kW/m^2 of peak solar power reaches the earth's surface) can produce electrical energy at the average rate of 20-30 W_e/m^2 , the average being taken over an entire day and night. The potential power per unit area for photovoltaic systems is far greater than for biomass. However, the mix of renewable energy sources most suitable for a particular country depends on many factors. We will see below that biomass is a promising future source of energy for Sweden, because of Sweden's low population density and high rainfall. By contrast, despite the high initial investment required, photovoltaics are undoubtedly a more promising future energy source for southerly countries with clear skies.

In comparing photovoltaics with biomass, we should be aware of the difference between electrical energy and energy contained in the chemical bonds of a primary fuel such as wood or rapeseed oil. If Sweden (for example) were to supply all its energy needs from biomass, part of the biomass would have to be burned to generate electricity. The efficiency of energy conversion in electricity generation from fuel is 20%-35%. Of course, in dual use power plants, part of the left-over heat from electrical power generation can be used to heat homes or greenhouses. However, hydropower, wind power and photovoltaics have an advantage in generating electrical power, since they do so directly and without loss, whereas generation of electricity from biomass involves a loss from the inefficiency of the conversion from fuel energy to electrical energy. Thus a rational renewable energy program for Sweden should involve a mixture of biomass for heating and direct fuel use, with hydropower and wind power for generation of electricity. Perhaps photovoltaics will also play a role in Sweden's future electricity generation, despite the country's northerly location and frequently cloudy skies.

The global market for photovoltaics is expanding at the rate of 30% per year. This development is driven by rising energy prices, subsidies to photovoltaics by governments, and the realization of the risks associated with global warming and consequent international commitments to reduce carbon emissions. The rapidly expanding markets have resulted in lowered photovoltaic production costs, and hence further expansion, still lower costs, etc. - a virtuous feedback loop.

Solar thermal power plants

Solar Parabolic Troughs can be used to heat a fluid, typically oil, in a pipe running along the focal axis. The heated fluid can then be used to generate electrical power. The liquid that is heated in this way need not be oil. In a solar thermal power plant in California, reflectors move in a manner that follows the sun's position and they concentrate solar energy onto a tower, where molten salt is heated to a temperature of 1050 degrees F (566 °C). The molten salt stores the heat, so that electricity can be generated even when the sun is not shining. The California plant generates 10 MW_e .



Figure 6.10: A rooftop array of photovoltaic cells.



Figure 6.11: A solar thermal power plant. Arrays of heliostatic reflectors concentrate the sun's rays onto molten salt in the tower. The plant produces electricity at night because the salt remains hot..



Figure 6.12: A solar cooker.



Figure 6.13: A rooftop solar thermal array for domestic water heating.

Solar designs in architecture

At present, the average global rate of use of primary energy is roughly 2 kW_t per person. In North America, the rate is 12 kW_t per capita, while in Europe, the figure is 6 kW_t . In Bangladesh, it is only 0.2 kW_t . This wide variation implies that considerable energy savings are possible, through changes in lifestyle, and through energy efficiency.

Important energy savings can be achieved through solar design in architecture. For example, insulation can be improved in walls, and insulating shutters can be closed at night.

In double envelope construction, a weatherproof shell surrounds the inner house. Between the outer shell and the house, sun-heated air circulates. A less extreme example of this principle is the construction of south-facing conservatories. The sun-heated air in the conservatories acts as a thermal buffer, and reduces heat loss from the house.

Solar design aims at making houses cool in the summer and warm in the winter. Awnings can be spread out in the summer to shade windows, and rolled together in the winter to allow sunshine to enter the house. Alternatively, deciduous trees can be planted in front of south-facing windows. During the summer, the leaves of the trees shade the windows, while in the winter, the leaves fall, allowing the sun to enter.

During daylight hours, houses can be illuminated by fiber optic light pipes, connected to a parabolic collector on the roof. The roof can also contain arrays of solar photovoltaic cells and solar water heaters.

Houses can be heated in the winter by heat pumps connected to a deeply buried network of pipes. Heat pumps function in much the same way as refrigerators or air conditioners. When they are used to warm houses in the winter, a volatile liquid such as ammonia is evaporated underground, where the temperature is relatively constant, not changing much between summer and winter. In the evaporation process, heat is absorbed from the ground. The gas is then compressed and re-liquefied within the house, and in this process, it releases the heat that was absorbed underground. Electricity is of course required to drive a heat pump, but far less electrical power is needed to do this than would be required to heat the house directly.

In general, solar design of houses and other buildings requires an initial investment, but over time, the investment is amply repaid through energy savings.

Solar systems for heating water and cooking

Solar heat collectors are already in common use to supply hot water for families or to heat swimming pools. A common form of the solar heat collector consists of a flat, blackened heat-collecting plate to which tubes containing the fluid to be heated are connected. The plate is insulated from the atmosphere by a layer of air (in some cases a partial vacuum) above which there is a sheet of glass. Water flowing through the tubes is collected in a tank whenever it is hotter than the water already there. In cases where there is a danger of freezing, the heated fluid may contain antifreeze, and it may then exchange heat with water in the collection tank. Systems of this kind can function even in climates



Figure 6.14: **Rows of wind turbines.**

as unfavorable as that of Northern Europe, although during winter months they must be supplemented by conventional water-heaters.

In the developing countries, wood is often used for cooking, and the result is sometimes deforestation, soil erosion and desertification. In order to supply an alternative, many designs for solar cooking have been developed. Often the designs are very simple, and many are both easy and inexpensive to build, the starting materials being aluminum foil and cardboard boxes.

Wind energy

Wind parks in favorable locations, using modern wind turbines, are able to generate $10 \text{ MW}_e/\text{km}^2$ or $10 \text{ W}_e/\text{m}^2$. Often wind farms are placed in offshore locations. When they are on land, the area between the turbines can be utilized for other purposes, for example for pasturage. For a country like Denmark, with good wind potential but cloudy skies, wind turbines can be expected to play a more important future role than photovoltaics. Denmark is already a world leader both in manufacturing and in using wind turbines. Today, on windy days, 100% of all electricity used in Denmark is generated by wind power, and the export of wind turbines makes a major contribution to the Danish economy. The use of wind power is currently growing at the rate of 38% per year. In the United States, it is the fastest-growing form of electricity generation.

The location of wind parks is important, since the energy obtainable from wind is proportional to the cube of the wind velocity. We can understand this cubic relationship by remembering that the kinetic energy of a moving object is proportional to the square



Figure 6.15: **Vertical axis wind turbines.**

of its velocity multiplied by the mass. Since the mass of air moving past a wind turbine is proportional to the wind velocity, the result is the cubic relationship just mentioned.

Before the decision is made to locate a wind park in a particular place, the wind velocity is usually carefully measured and recorded over an entire year. For locations on land, mountain passes are often very favorable locations, since wind velocities increase with altitude, and since the wind is concentrated in the passes by the mountain barrier. Other favorable locations include shorelines and offshore locations on sand bars. This is because onshore winds result when warm air rising from land heated by the sun is replaced by cool marine air. Depending on the season, the situation may be reversed at night, and an offshore wind may be produced if the water is warmer than the land.

The cost of wind-generated electrical power is currently lower than the cost of electricity generated by burning fossil fuels.

The “energy payback ratio” of a power installation is defined as the ratio of the energy produced by the installation over its lifetime, divided by the energy required to manufacture, construct, operate and decommission the installation. For wind turbines, this ratio is 17-39, compared with 11 for coal-burning plants. The construction energy of a wind turbine is usually paid back within three months.

Besides the propeller-like design for wind turbines there are also designs where the rotors turn about a vertical shaft. One such design was patented in 1927 by the French aeronautical engineer Georges Jean Marie Darrieus. The blades of a Darrieus wind turbine are airfoils similar to the wings of an aircraft. As the rotor turns in the wind, the stream of air striking the airfoils produces a force similar to the “lift” of an airplane wing. This



Figure 6.16: **Wind turbines on the Danish island of Samsø** The island was the first in the world to achieve 100% renewable energy.

force pushes the rotor in the direction that it is already moving. The Darrieus design has some advantages over conventional wind turbine design, since the generator can be placed at the bottom of the vertical shaft, where it may be more easily serviced. Furthermore, the vertical shaft can be lighter than the shaft needed to support a conventional wind turbine.

One problem with wind power is that it comes intermittently, and demand for electrical power does not necessarily come at times when the wind is blowing most strongly. To deal with the problem of intermittency, wind power can be combined with other electrical power sources in a grid. Alternatively, the energy generated can be stored, for example by pumped hydroelectric storage or by using hydrogen technology, as will be discussed below.

Bird lovers complain that birds are sometimes killed by rotor blades. This is true, but the number killed is small. For example, in the United States, about 70,000 birds per year are killed by turbines, but this must be compared with 57 million birds killed by automobiles and 97.5 million killed by collisions with plate glass.

The aesthetic aspects of wind turbines also come into the debate. Perhaps in the future, as wind power becomes more and more a necessity and less a matter of choice, this will be seen as a “luxury argument”.

A Danish island reaches 100% renewable energy

The Danish island of Samsø is only 112 square kilometers in size, and its population numbers only 4,300. Nevertheless, it has a unique distinction. Samsø was the first closed land area to declare its intention of relying entirely on renewable energy, and it has now achieved this aim, provided that one stretches the definitions slightly.



Figure 6.17: **Hydroelectric power does not suffer from the problem of intermittency, but may sometimes produce undesirable social and ecological impacts.**

In 1997, the Danish Ministry of Environment and Energy decided to sponsor a renewable-energy contest. In order to enter, communities had to submit plans for how they could make a transition from fossil fuels to renewable energy. An engineer (who didn't live there) thought he knew how Samsø could do this, and together with the island's mayor he submitted a plan which won the contest. As a result, the islanders became interested in renewable energy. They switched from furnaces to heat pumps, and formed cooperatives for the construction of windmill parks in the sea near to the island. By 2005, Samsø was producing, from renewable sources, more energy than it was using. The islanders still had gasoline-driven automobiles, but they exported from their windmill parks an amount of electrical energy that balanced the fossil fuel energy that they imported. This is a story that can give us hope for the future, although a farming community like Samsø cannot serve as a model for the world.

Hydroelectric power

In 2015, hydroelectric power supplied 16.6% of all electrical power, and 70% of the electrical power generated from renewable energy. In the developed countries, the potential for increasing this percentage is small, because most of the suitable sites for dams are already in use. Mountainous regions of course have the greatest potential for hydroelectric power, and this correlates well with the fact that virtually all of the electricity generated in Norway comes from hydro, while in Iceland and Austria the figures are respectively 83% and 67%. Among the large hydroelectric power stations now in use are the La Grande complex in Canada (16 GW_e) and the Itapú station on the border between Brazil and Paraguay (14 GW_e). The Three Gorges Dam in China produces 18.2 GW_e .

Table 6.1: Technical potential and utilization of hydropower. (Data from World Energy Council, 2003.)

Region	Technical potential	Annual output	Percent used
Asia	0.5814 TW _e	0.0653 TW _e	11%
S. America	0.3187 TW _e	0.0579 TW _e	18%
Europe	0.3089 TW _e	0.0832 TW _e	27%
Africa	0.2155 TW _e	0.0091 TW _e	4%
N. America	0.1904 TW _e	0.0759 TW _e	40%
Oceania	0.0265 TW _e	0.0046 TW _e	17%
World	1.6414 TW _e	0.2960 TW _e	18%

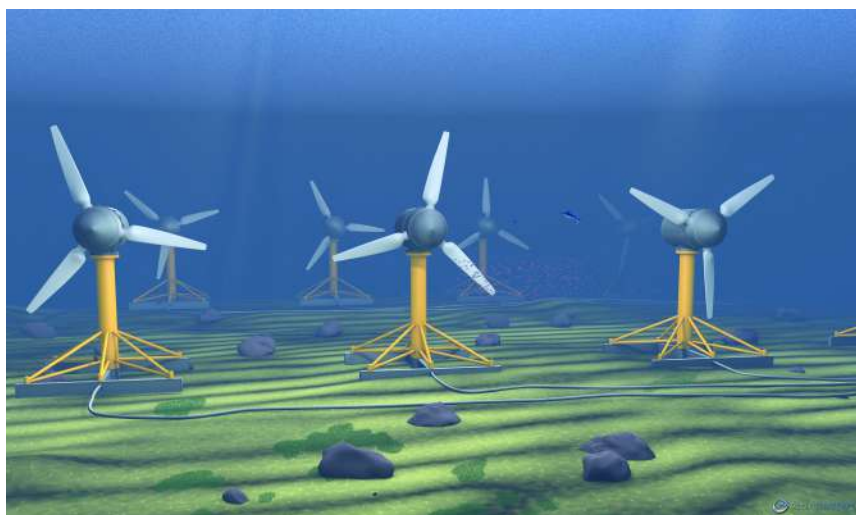


Figure 6.18: **Underwater turbines can make use of the energy of ocean currents.**

Even in regions where the percentage of hydro in electricity generation is not so high, it plays an important role because hydropower can be used selectively at moments of peak demand. Pumping of water into reservoirs can also be used to store energy.

The creation of lakes behind new dams in developing countries often involves problems, for example relocation of people living on land that will be covered by water, and loss of the land for other purposes¹⁶. However the energy gain per unit area of lake can be very large - over $100 \text{ W}_e/\text{m}^2$. Fish ladders can be used to enable fish to reach their spawning grounds above dams. In addition to generating electrical power, dams often play useful roles in flood control and irrigation.

At present, hydroelectric power is used in energy-intensive industrial processes, such as the production of aluminum. However, as the global energy crisis becomes more severe, we can expect that metals derived from electrolysis, such as aluminum and magnesium, will be very largely replaced by other materials, because the world will no longer be able to afford the energy needed to produce them.

Energy from the ocean

Tidal power

The twice-daily flow of the tides can be harnessed to produce electrical power. Ultimately tidal energy comes from the rotation of the earth and its interaction with the moon's gravitational field. The earth's rotation is very gradually slowing because of tidal friction, and the moon is gradually receding from the earth, but this process will take such an extremely long time that tidal energy can be thought of as renewable.

¹⁶Over a million people were displaced by the construction of the Three Gorges Dam in China, and many sites of cultural value were lost

There are two basic methods for harnessing tidal power. One can build barriers that create level differences between two bodies of water, and derive hydroelectric power from the head of water thus created. Alternatively it is possible to place the blades of turbines in a tidal stream. The blades are then turned by the tidal current in much the same way that the blades of a wind turbine are turned by currents of air.

There are plans for using the second method on an extremely large scale in Cook Strait, near New Zealand. A company founded by David Beach and Chris Bathurst plans to anchor 7,000 turbines to the sea floor of Cook Strait in such a way that they will float 40 meters below the surface. Beach and Bathurst say that in this position, the turbines will be safe from the effects of earthquakes and storms. The tidal flow through Cook Strait is so great that the scheme could supply all of New Zealand's electricity if the project is completed on the scale visualized by its founders.

Choosing the proper location for tidal power stations is important, since the height of tides depends on the configuration of the land. For example, tides of 17 meters occur in the Bay of Fundy, at the upper end of the Gulf of Maine, between New Brunswick and Nova Scotia. Here tidal waves are funneled into the bay, creating a resonance that results in the world's greatest level difference between high and low tides. An 18 MW_e dam-type tidal power generation station already exists at Annapolis River, Nova Scotia, and there are proposals to increase the use of tidal power in the Bay of Fundy. Some proposals involve turbines in the tidal stream, similar to those proposed for use in the Cook Strait.

In the future, favorable locations for tidal power may be exploited to their full potentialities, even though the output of electrical energy exceeds local needs. The excess energy can be stored in the form of hydrogen (see below) and exported to regions deficient in renewable energy resources.

Wave energy

At present, the utilization of wave energy is in an experimental stage. In Portugal, there are plans for a wave farm using the Pelamis Wave Energy Converter. The Pelamis is a long floating tube with two or more rigid sections joined by hinges. The tube is tethered with its axis in the direction of wave propagation. The bending between sections resulting from passing waves is utilized to drive high pressure oil through hydraulic motors coupled to electrical generators. Each wave farm in the Portuguese project is planned to use three Pelamis converters, each capable of producing 750 kW_e. Thus the total output of each wave farm will be 2.25 MW_e.

Another experimental wave energy converter is Salter's Duck, invented in the 1970's by Prof. Stephen Salter of the University of Edinburgh, but still being developed and improved. Like the Pelamis, the Duck is also cylindrical in shape, but the axis of the cylinder is parallel to the wave front, i.e. perpendicular to the direction of wave motion. A floating cam, attached to the cylinder, rises and falls as a wave passes, driving hydraulic motors within the cylinder. Salter's Duck is capable of using as much as 65% of the wave's energy.

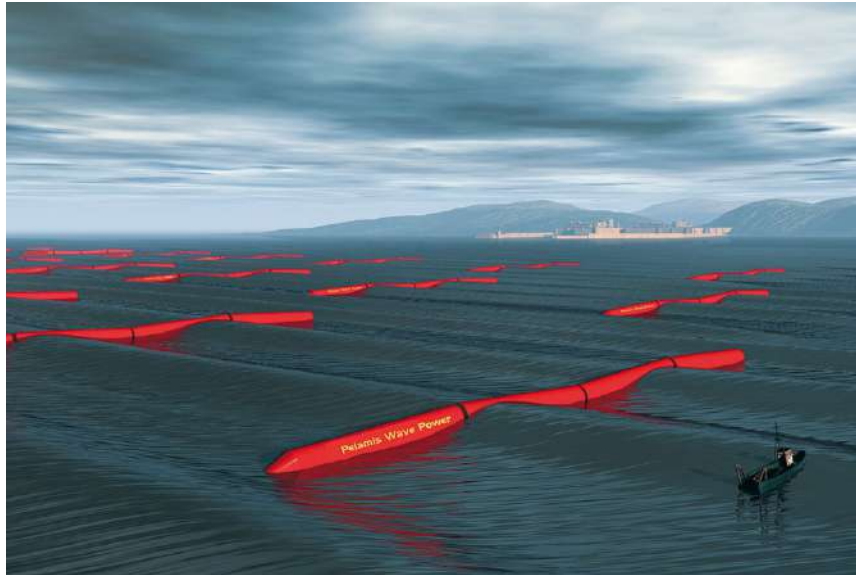


Figure 6.19: The Pelamis wave energy transformer floats on the ocean like a giant sea snake. It consists of several segments which move against each other and build up hydraulic pressure. This in turn drives a turbine. A new Pelamis generation is currently under construction.

The energy potentially available from waves is very large, amounting to as much as 100 kilowatts per meter of wave front in the best locations.

Ocean thermal energy conversion

In tropical regions, the temperature of water at the ocean floor is much colder than water at the surface. In ocean thermal energy conversion, cold water is brought to the surface from depths as great as 1 km, and a heat engine is run between deep sea water at a very low temperature and surface water at a much higher temperature.

According to thermodynamics, the maximum efficiency of a heat engine operating between a cold reservoir at the absolute temperature T_C and a hot reservoir at the absolute temperature T_H is given by $1 - T_C/T_H$. In order to convert temperature on the centigrade scale to absolute temperature (degrees Kelvin) one must add 273 degrees. Thus the maximum efficiency of a heat engine operating between water at the temperature of 25 °C and water at 5 °C is $1 - (5 + 273)/(25 + 273) = 0.067 = 6.7\%$. The efficiency of heat engines is always less than the theoretical maximum because of various losses, such as the loss due to friction. The actual overall efficiencies of existing ocean thermal energy conversion (OTEC) stations are typically 1-3%. On the other hand, the amount of energy potentially available from differences between surface and bottom ocean temperatures is extremely large.

Since 1974, OTEC research has been conducted by the United States at the Natural Energy Laboratory of Hawaii. The Japanese government also supports OTEC research,

and India has established a 1 MW_e OTEC power station floating in the ocean near to Tamil Nadu.

Renewable energy from evaporation

A September 26, 2017 article by Ahmet-Hamdi Cavusoglu et al. in *Nature Communications* points to evaporation as a future source of renewable energy. Here are some excerpts from the article:

“About 50% of the solar energy absorbed at the Earth’s surface drives evaporation, fueling the water cycle that affects various renewable energy resources, such as wind and hydropower. Recent advances demonstrate our nascent ability to convert evaporation energy into work, yet there is little understanding about the potential of this resource.

“Here we study the energy available from natural evaporation to predict the potential of this ubiquitous resource. We find that natural evaporation from open water surfaces could provide power densities comparable to current wind and solar technologies while cutting evaporative water losses by nearly half. We estimate up to 325 GW of power is potentially available in the United States. Strikingly, water’s large heat capacity is sufficient to control power output by storing excess energy when demand is low, thus reducing intermittency and improving reliability. Our findings motivate the improvement of materials and devices that convert energy from evaporation...

“Recent advances in water responsive materials and devices demonstrate the ability to convert energy from evaporation into work. These materials perform work through a cycle of absorbing and rejecting water via evaporation. These water-responsive materials can be incorporated into evaporation-driven engines that harness energy when placed above a body of evaporating water. With improvements in energy conversion efficiency, such devices could become an avenue to harvest energy via natural evaporation from water reservoirs.”

Ozgur Sahin, a biophysicist at Columbia, has developed technology that uses spores from the harmless soil-dwelling bacterium *B. subtilis* to absorb and release water when the relative humidity of the surrounding air changes. At high humidity, the spores take in water and expand, and at low humidity they release water and contract, acting like a muscle.

Biomass

Biomass is defined as any energy source based on biological materials produced by photosynthesis - for example wood, sugar beets, rapeseed oil, crop wastes, dung, urban organic wastes, processed sewage, etc. Using biomass for energy does not result in the net emission of CO₂, since the CO₂ released by burning the material had previously been absorbed from the atmosphere during photosynthesis. If the biological material had decayed instead of being burned, it would released the same amount of CO₂ as in the burning process.

The solar constant has the value 1.4 kilowatts/m². It represents the amount of solar



Figure 6.20: **Rapeseed is grown in several countries, including Denmark and the UK. Experimental Danish buses are already running on rapeseed oil.**

energy per unit area¹⁷ that reaches the earth, before the sunlight has entered the atmosphere. Because the atmosphere reflects 6% and absorbs 16%, the peak power at sea level is reduced to 1.0 kW/m^2 . Clouds also absorb and reflect sunlight. Average cloud cover reduces the energy of sunlight a further 36%. Also, we must take into account the fact that the sun's rays do not fall perpendicularly onto the earth's surface. The angle that they make with the surface depends on the time of day, the season and the latitude.

In Sweden, which lies at a northerly latitude, the solar energy per unit of horizontal area is less than for countries nearer the equator. Nevertheless, Göran Persson, during his term as Prime Minister of Sweden, announced that his government intends to make the country independent of imported oil by 2020 through a program that includes energy from biomass.

In his thesis, *Biomass in a Sustainable Energy System*, the Swedish researcher Pål Börjesson states that of various crops grown as biomass, the largest energy yields come from short-rotation forests (*Salix viminalis*, a species of willow) and sugar beet plantations. These have an energy yield of from 160 to 170 GJ_t per hectare-year. (The subscript t means "thermal". Energy in the form of electricity is denoted by the subscript e). One can calculate that this is equivalent to about $0.5 \text{ MW}_t/\text{km}^2$, or $0.5 \text{ W}_t/\text{m}^2$. Thus, although 1.0 kW/m^2 of solar energy reaches the earth at noon at the equator, the trees growing in northerly Sweden can harvest a day-and-night and seasonal average of only 0.5 Watts of thermal energy per horizontal square meter¹⁸. Since Sweden's present primary energy use is approximately 0.04 TW_t , it follows that if no other sources of energy were used, a square area of *Salix* forest 290 kilometers on each side would supply Sweden's present energy needs. This corresponds to an area of $84,000 \text{ km}^2$, about 19% of Sweden's total area¹⁹.

¹⁷The area is assumed to be perpendicular to the sun's rays.

¹⁸In tropical regions, the rate of biomass production can be more than double this amount.

¹⁹Additional land area would be needed to supply the energy required for planting, harvesting, trans-

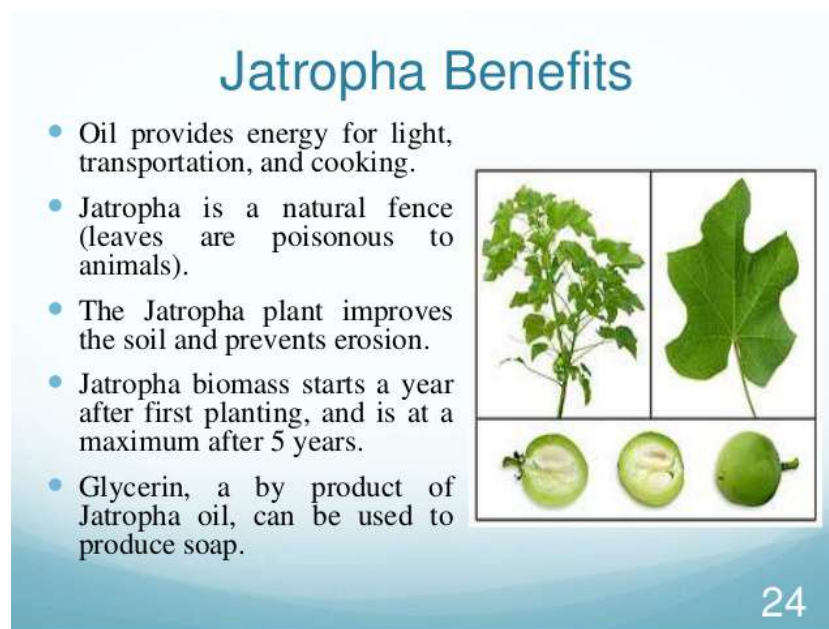


Figure 6.21: In some countries, Jatropha is a promising source of biomass..

Of course, Sweden's renewable energy program will not rely exclusively on energy crops, but on a mixture of sources, including biomass from municipal and agricultural wastes, hydropower, wind energy and solar energy.

At present, both Sweden and Finland derive about 30% of their electricity from biomass, which is largely in the form of waste from the forestry and paper industries of these two countries.

Despite their northerly location, the countries of Scandinavia have good potentialities for developing biomass as an energy source, since they have small population densities and adequate rainfall. In Denmark, biodiesel oil derived from rapeseed has been used as fuel for experimental buses. Rapeseed fields produce oil at the rate of between 1,000 and 1,300 liters per hectare-crop. The energy yield is 3.2 units of fuel product energy for every unit of fuel energy used to plant the rapeseed, and to harvest and process the oil. After the oil has been pressed from rapeseed, two-thirds of the seed remains as a protein-rich residue which can be fed to cattle.

Miscanthus is a grassy plant found in Asia and Africa. Some forms will also grow in Northern Europe, and it is being considered as an energy crop in the United Kingdom. Miscanthus can produce up to 18 dry tonnes per hectare-year, and it has the great advantage that it can be cultivated using ordinary farm machinery. The woody stems are very suitable for burning, since their water content is low (20-30%).

For some southerly countries, honge oil, derived from the plant *Pongamia pinnata* may prove to be a promising source of biomass energy. Studies conducted by Dr. Udishi Shrinivasa at the Indian Institute of Sciences in Bangalore indicate that honge oil can be

portation and utilization of the wood.

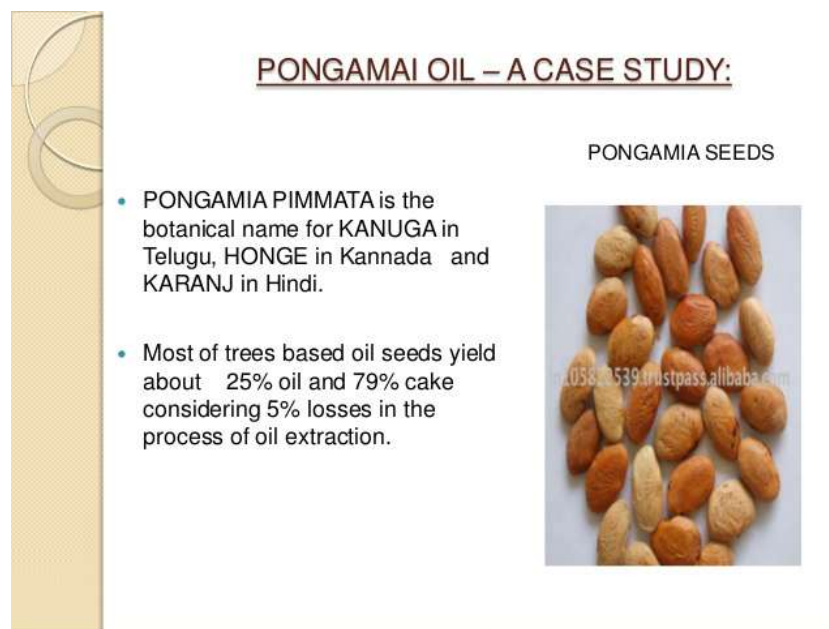


Figure 6.22: **The price of honge oil is quite competitive with other forms of oil.**

produced at the cost of \$150 per ton. This price is quite competitive when compared with other potential fuel oils.

Recent studies have also focused on a species of algae that has an oil content of up to 50%. Algae can be grown in desert areas, where cloud cover is minimal. Farm waste and excess CO₂ from factories can be used to speed the growth of the algae.

It is possible that in the future, scientists will be able to create new species of algae that use the sun's energy to generate hydrogen gas. If this proves to be possible, the hydrogen gas may then be used to generate electricity in fuel cells, as will be discussed below in the section on hydrogen technology. Promising research along this line is already in progress at the University of California, Berkeley.

Biogas is defined as the mixture of gases produced by the anaerobic digestion of organic matter. This gas, which is rich in methane (CH₄), is produced in swamps and landfills, and in the treatment of organic wastes from farms and cities. The use of biogas as a fuel is important not only because it is a valuable energy source, but also because methane is a potent greenhouse gas, which should not be allowed to reach the atmosphere. Biogas produced from farm wastes can be used locally on the farm, for cooking and heating, etc. When biogas has been sufficiently cleaned so that it can be distributed in a pipeline, it is known as "renewable natural gas". It may then be distributed in the natural gas grid, or it can be compressed and used in internal combustion engines. Renewable natural gas can also be used in fuel cells, as will be discussed below in the section on Hydrogen Technology.

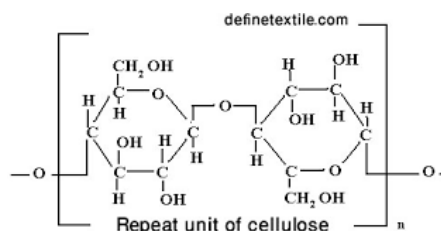


Figure 6.23: Cellulose is a polysaccharide. In other words, it is a long polymer whose subunits are sugars. The links between the sugar subunits in the chain can be broken, for example by the action of enzymes or acids. After this has been done, the resulting sugars can be fermented into alcohols, and these can be used to fuel motor vehicles or aircraft.

Cellulostic ethanol

The fact that alcohols such as ethanol can be produced from cellulose has long been known.²⁰ In 1819, the French chemist Henri Braconnot demonstrated that cellulose could be broken down into sugars by treating it with sulfuric acid. The sugars thus produced could then be fermented into alcohols which could be used as liquid fuels.

In 1898, Germany built factories to commercialize this process, and shortly afterwards the same was done in the United States using a slightly different technique. These plants producing cellulostic ethanol operated during World War I, but the plants closed after the end of the war because of the cheapness and easy availability of fossil fuels. The production of cellulostic ethanol was revived during World War II.

During the last two decades, development of enzymatic techniques has supplied a better method of breaking the long cellulose polymer chain into sugars. In fact, it has recently become possible to use microbial enzymes both for this step and for the fermentation step.

In a September 9, 2008 article in the *MIT Technology Review*, Prachi Patal wrote: “New genetically modified bacteria could slash the costs of producing ethanol from cellulostic biomass, such as corn cobs and leaves, switchgrass, and paper pulp. The microbes produce ethanol at higher temperatures than are possible using yeast, which is currently employed to ferment sugar into the biofuel. The higher temperature more than halves the quantity of the costly enzymes needed to split cellulose into the sugars that the microbes can ferment. What’s more, while yeast can only ferment glucose, ‘this microorganism is good at using all the different sugars in biomass and can use them simultaneously and rapidly,’ says Lee Lynd, an engineering professor at Dartmouth College, who led the microbe’s development...

“Lynd wants to create microbes that would do it all: efficiently break down the cellulose and hemicellulose, and then ferment all the resulting sugars. Lynd, a cofounder of Mascoma, is working with colleagues at the startup, based in Cambridge, MA, to develop a simple one-step process for making cellulostic ethanol. In the combined process, a mixture of biomass and the microbes would go into a tank, and ethanol would come out.”

Cellulostic ethanol has several advantages over alcohol derived from grain;

²⁰See the Wikipedia article on *Cellulostic Ethanol*

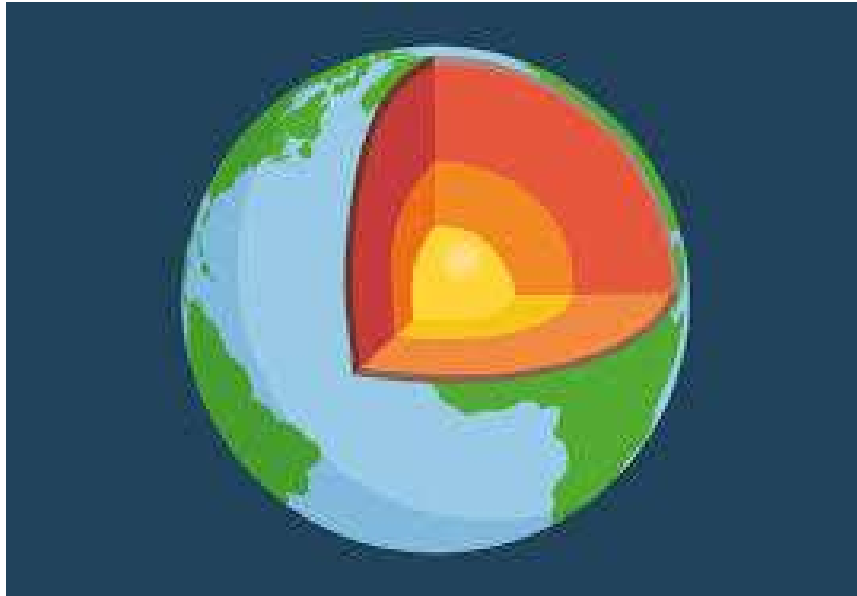


Figure 6.24: **The source of geothermal energy is the radioactive decay of elements deep within the earth.**

- Cellulostic ethanol avoids the food-fuel competition.
- The net greenhouse-gas-reducing effect of ethanol derived from grain is questionable.
- Cellulostic ethanol can use cardboard and paper waste as starting substances, thus reducing the quantity of trash in waste dumps.

Geothermal energy

The ultimate source of geothermal energy is the decay of radioactive nuclei in the interior of the earth. Because of the heat produced by this radioactive decay, the temperature of the earth's core is 4300 °C. The inner core is composed of solid iron, while the outer core consists of molten iron and sulfur compounds. Above the core is the mantle, which consists of a viscous liquid containing compounds of magnesium, iron, aluminum, silicon and oxygen. The temperature of the mantle gradually decreases from 3700 °C near the core to 1000 °C near the crust. The crust of the earth consists of relatively light solid rocks and it varies in thickness from 5 to 70 km.

The outward flow of heat from radioactive decay produces convection currents in the interior of the earth. These convection currents, interacting with the earth's rotation, produce patterns of flow similar to the trade winds of the atmosphere. One result of the currents of molten conducting material in the interior of the earth is the earth's magnetic field. The crust is divided into large sections called "tectonic plates", and the currents of molten material in the interior of the earth also drag the plates into collision with each other. At the boundaries, where the plates collide or split apart, volcanic activity



Figure 6.25: The “ring of fire” is especially favorable for geothermal energy installations. The ring follows the western coasts of South America and North America to Alaska, After crossing the Bering Sea, it runs southward past Japan and Indonesia to New Zealand. Earthquakes and volcanic activity along this ring are produced by the collision of tectonic plates. Another strip-like region very favorable for geothermal installations follows Africa’s Rift Valley northward through Turkey and Greece to Italy, while a third pass through Iceland.

occurs. Volcanic regions near the tectonic plate boundaries are the best sites for collection of geothermal energy.

The entire Pacific Ocean is ringed by regions of volcanic and earthquake activity, the so-called Ring of Fire. This ring extends from Tierra del Fuego at the southernmost tip of South America, northward along the western coasts of both South America and North America to Alaska. The ring then crosses the Pacific at the line formed by the Aleutian Islands, and it reaches the Kamchatka Peninsula in Russia. From there it extends southward along the Kurile Island chain and across Japan to the Philippine Islands, Indonesia and New Zealand. Many of the islands of the Pacific are volcanic in nature. Another important region of volcanic activity extends northward along the Rift Valley of Africa to Turkey, Greece and Italy. In the Central Atlantic region, two tectonic plates are splitting apart, thus producing the volcanic activity of Iceland. All of these regions are very favorable for the collection of geothermal power.

The average rate at which the energy created by radioactive decay in the interior of the earth is transported to the surface is $0.06 \text{ W}_t/\text{m}^2$. However, in volcanic regions near the boundaries of tectonic plates, the rate at which the energy is conducted to the surface is much higher - typically $0.3 \text{ W}_t/\text{m}^2$. If we insert these figures into the thermal conductivity law

$$q = K_T \frac{\Delta T}{z}$$

we can obtain an understanding of the types of geothermal resources available throughout

the world. In the thermal conductivity equation, q is the power conducted per unit area, while K_T is the thermal conductivity of the material through the energy is passing. For sandstones, limestones and most crystalline rocks, thermal conductivities are in the range 2.5-3.5 $W_t/(m\ ^\circ C)$. Inserting these values into the thermal conductivity equation, we find that in regions near tectonic plate boundaries we can reach temperatures of 200 $^\circ C$ by drilling only 2 kilometers into rocks of the types named above. If the strata at that depth contain water, it will be in the form of highly-compressed steam. Such a geothermal resource is called a *high-enthalpy* resource²¹.

In addition to high-enthalpy geothermal resources there are *low-enthalpy* resources in nonvolcanic regions of the world, especially in basins covered by sedimentary rocks. Clays and shales have a low thermal conductivity, typically 1-2 $W_t/(m\ ^\circ C)$. When we combine these figures with the global average geothermal power transmission, $q = 0.06\ W_t/m^2$, the thermal conduction equation tells us that $\Delta T/z = 0.04\ ^\circ C/m$. In such a region the geothermal resources may not be suitable for the generation of electrical power, but nevertheless adequate for heating buildings. The Creil district heating scheme north of Paris is an example of a project where geothermal energy from a low enthalpy resource is used for heating buildings.

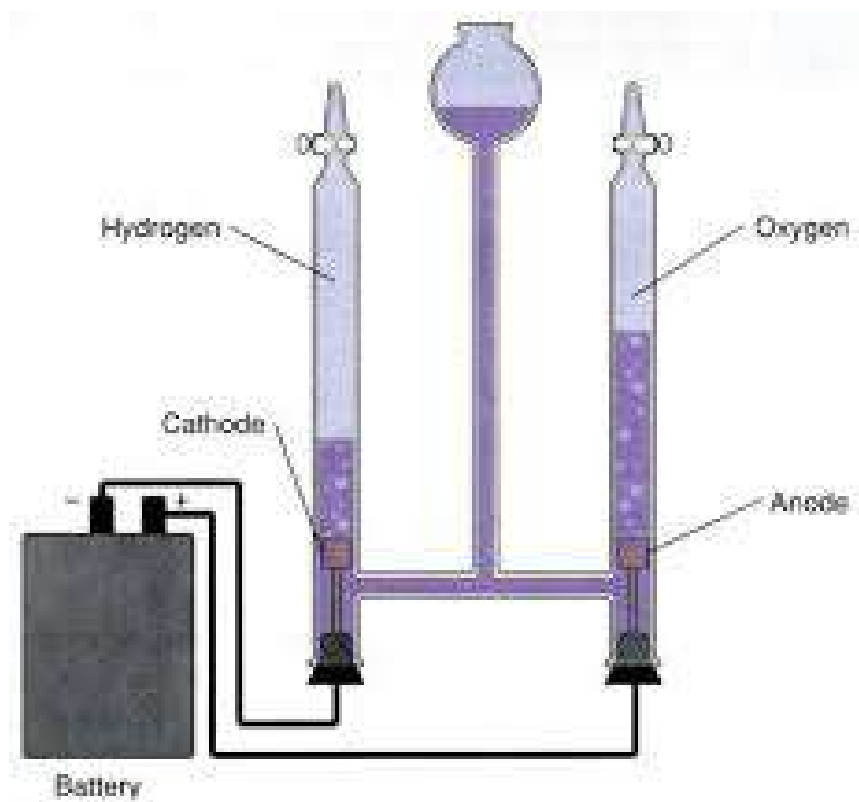
The total quantity of geothermal electrical power produced in the world today is 8 GW_e , with an additional 16 GW_t used for heating houses and buildings. In the United States alone, 2.7 GW_e are derived from geothermal sources. In some countries, for example Iceland and Canada, geothermal energy is used both for electrical power generation and for heating houses.

There are three methods for obtaining geothermal power in common use today: Deep wells may yield dry steam, which can be used directly to drive turbines. Alternatively water so hot that it boils when brought to the surface may be pumped from deep wells in volcanic regions. The steam is then used to drive turbines. Finally, if the water from geothermal wells is less hot, it may be used in binary plants, where its heat is exchanged with an organic fluid which then boils. In this last method, the organic vapor drives the turbines. In all three methods, water is pumped back into the wells to be reheated. The largest dry steam field in the world is The Geysers, 145 kilometers north of San Francisco, which produces 1,000 MW_e .

There is a fourth method of obtaining geothermal energy, in which water is pumped down from the surface and is heated by hot dry rocks. In order to obtain a sufficiently large area for heat exchange the fissure systems in the rocks must be augmented, for example by pumping water down at high pressures several hundred meters away from the collection well. The European Union has established an experimental station at Soultz-sous-Forêts in the Upper Rhine to explore this technique. The experiments performed at Soultz will determine whether the "hot dry rock" method can be made economically viable. If so, it can potentially offer the world a very important source of renewable energy.

The molten lava of volcanoes also offers a potential source of geothermal energy that

²¹Enthalpy $\equiv H \equiv U + PV$ is a thermodynamic quantity that takes into account not only the internal energy U of a gas, but also energy PV that may be obtained by allowing it to expand.

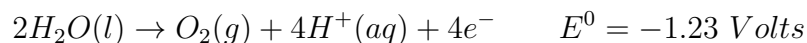
Figure 6.26: **Electrolysis of water.**

may become available in the future, but at present, no technology has been developed that is capable of using it.

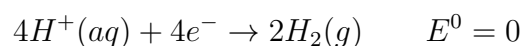
Hydrogen technologies

Electrolysis of water

When water containing a little acid is placed in a container with two electrodes and subjected to an external direct current voltage greater than 1.23 Volts, bubbles of hydrogen gas form at one electrode (the cathode), while bubbles of oxygen gas form at the other electrode (the anode). At the cathode, the half-reaction



takes place, while at the anode, the half-reaction



occurs.

Half-reactions differ from ordinary chemical reactions in containing electrons either as reactants or as products. In electrochemical reactions, such as the electrolysis of water,

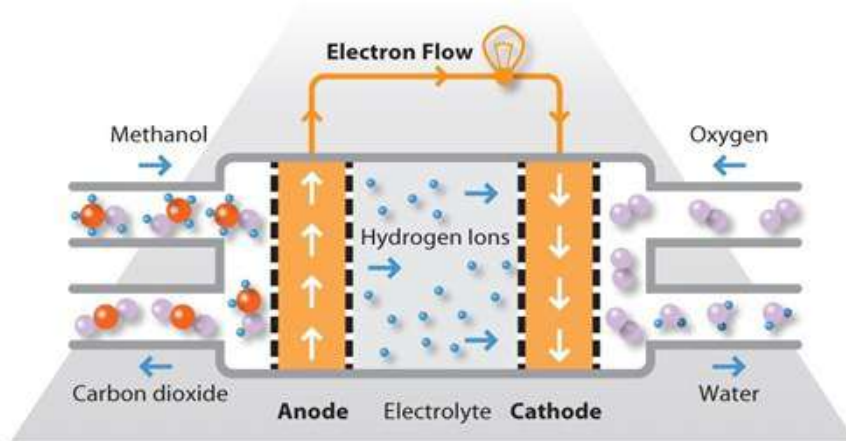
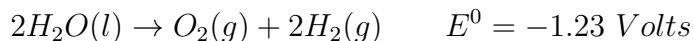


Figure 6.27: A methanol fuel cell.

these electrons are either supplied or removed by the external circuit. When the two half-reactions are added together, we obtain the total reaction:



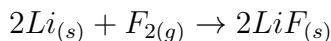
Notice that $4H^+$ and $4e^-$ cancel out when the two half-reactions are added. The total reaction does not occur spontaneously, but it can be driven by an external potential E , provided that the magnitude of E is greater than 1.23 volts.

When this experiment is performed in the laboratory, platinum is often used for the electrodes, but electrolysis of water can also be performed using electrodes made of graphite.

Electrolysis of water to produce hydrogen gas has been proposed as a method for energy storage in a future renewable energy system. For example, it might be used to store energy generated by photovoltaics in desert areas of the world. Compressed hydrogen gas could then be transported to other regions and used in fuel cells. Electrolysis of water and storage of hydrogen could also be used to solve the problem of intermittency associated with wind energy or solar energy.

Half reactions

Chemical reactions in which one or more electrons are transferred are called *oxidation-reduction reactions*. Any reaction of this type can be used in a fuel cell. As an example, we can consider the oxidation-reduction reaction in which solid lithium metal reacts with fluorine gas;



This reaction can be split into two half-reactions,



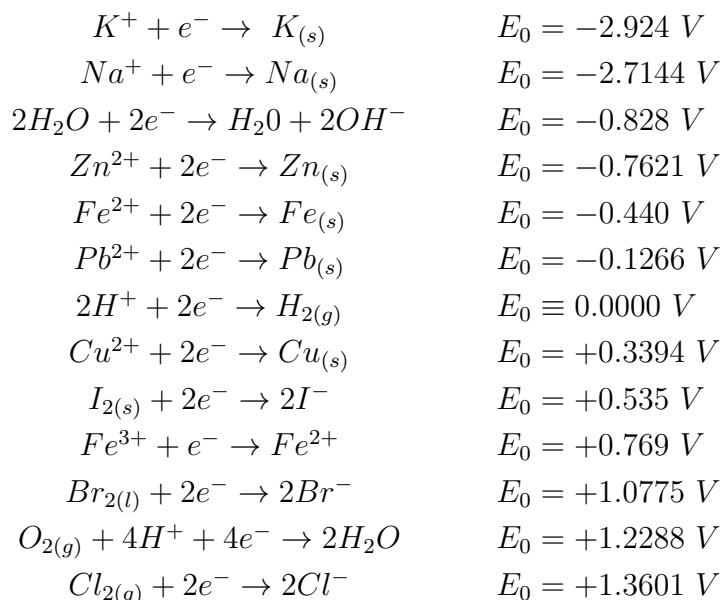
and



The quantity E_0 which characterizes these half-reactions is called *standard potential* of the half-reaction, and it is measured in Volts. If the oxidation-reduction reaction is used as the basis of a fuel cell, the voltage of the cell is the difference between the two standard potentials. In the lithium fluoride example, it is

$$2.87 \text{ V} - (-3.040 \text{ V}) = 5.91 \text{ V}$$

Here are a few more half-reactions and their standard potentials:



Fuel cells are closely related to storage batteries. Essentially, when we recharge a storage battery we are just running a fuel cell backwards, applying an electrical potential which is sufficient to make a chemical reaction run in a direction opposite to the way that it would run spontaneously. When the charged battery is afterwards used to drive a vehicle or to power an electronic device, the reaction runs in the spontaneous direction, but the energy of the reaction, instead of being dissipated as heat, drives electrons through an external circuit and performs useful work.

6.11 Renewables are now much cheaper than fossil fuels!

According to an article written by Megan Darby and published in *The Guardian* on 26 January, 2016, “Solar power costs are tumbling so fast the technology is likely to fast outstrip mainstream energy forecasts.

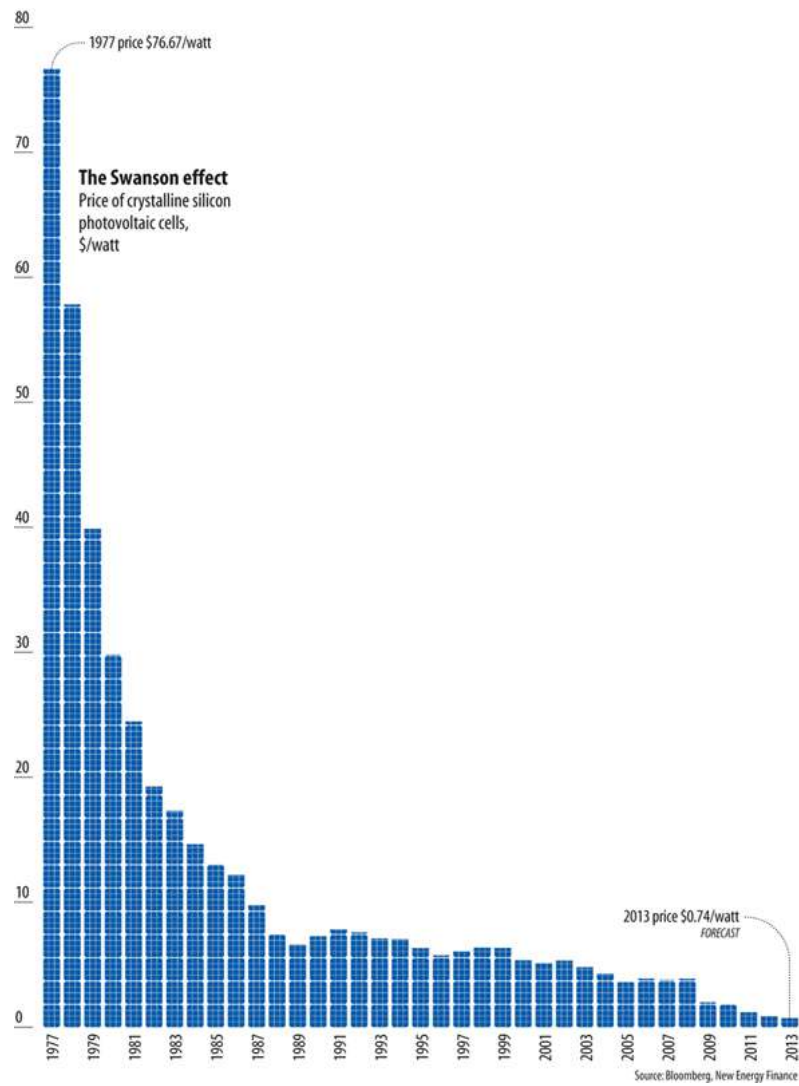


Figure 6.28: The cost of photovoltaic cell panels is falling rapidly

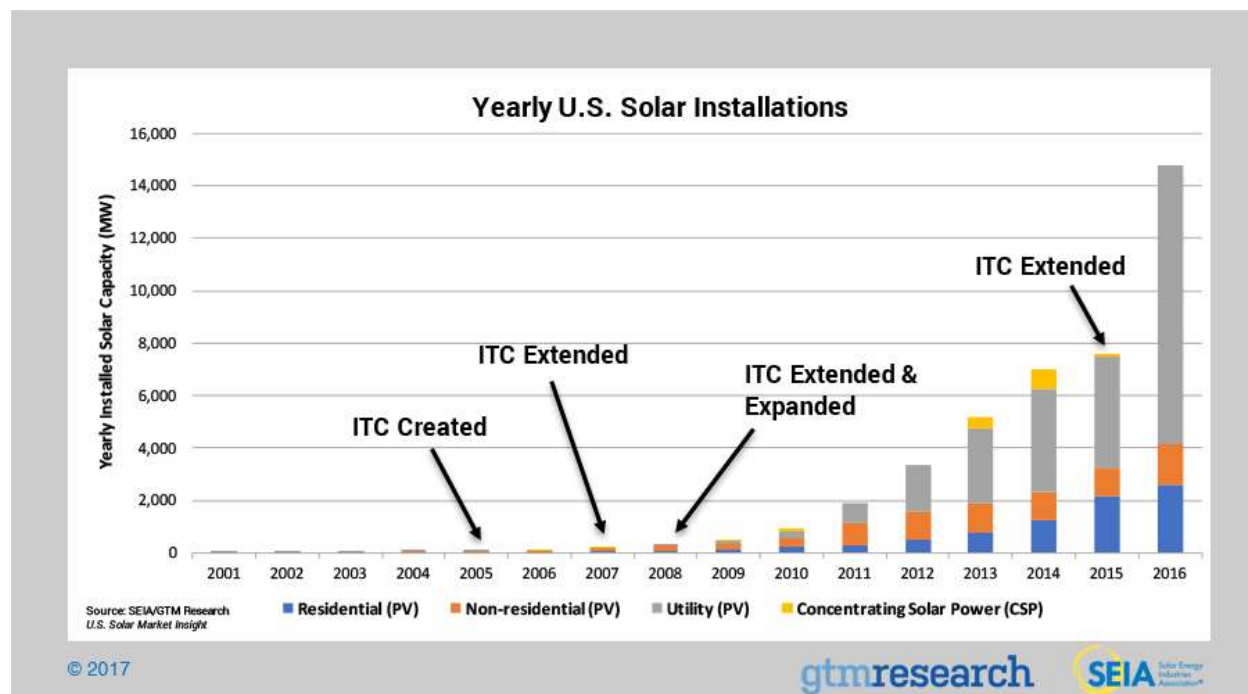


Figure 6.29: Driven by falling prices, new solar installations in the United States are increasing rapidly. The acronym ITC stands for Solar Investment Tax Credit. Commercial prices have fallen by 58% since 2012 and by 16% in the last year

“That is the conclusion of Oxford University researchers, based on a new forecasting model published in Research Policy²².

“Commercial prices have fallen by 58% since 2012 and by 16

“Since the 1980s, panels to generate electricity from sunshine have got 10% cheaper each year. That is likely to continue, the study said, putting solar on course to meet 20% of global energy needs by 2027.’ ’

6.12 Lester R. Brown

In December 2008, Lester R. Brown called attention to the following facts:

- The renewable energy industry - wind, solar, geothermal - are expanding by over 30 percent yearly;
- There are now, in the U.S., 24,000 megawatts of wind generating capacity online, but there is a staggering 225,000 megawatts of planned wind farms;

²²<http://www.sciencedirect.com/science/article/pii/S0048733315001699>

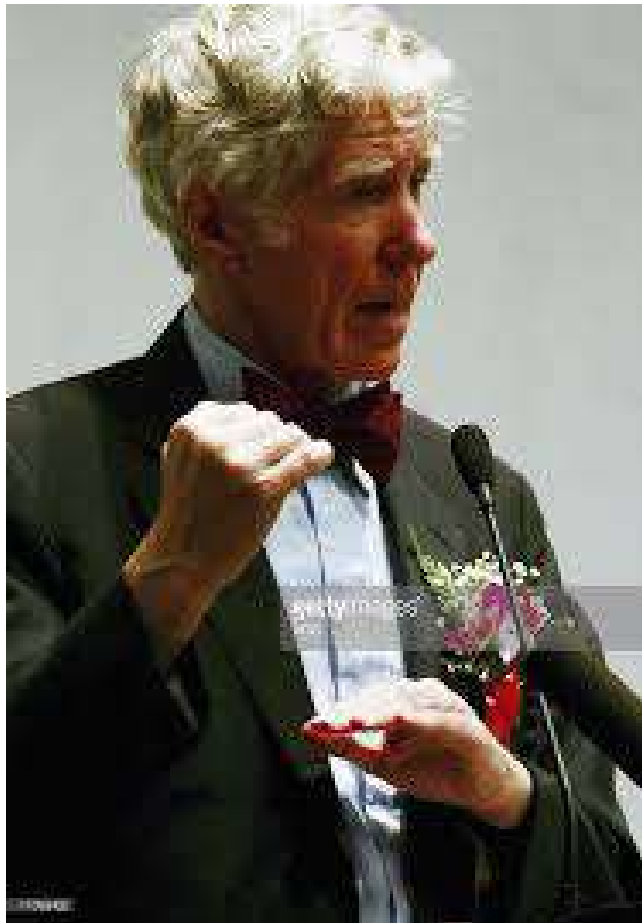


Figure 6.30: Lester R. Brown, born in 1934, is the author of more than 50 books, and he has been called “...one of the world’s most influential thinkers” (Washington Post). He is the founder of the Worldwatch Institute and the Earth Policy Institute. Books produced by Brown and his coworkers at the EPI can be freely downloaded and circulated. The 2015 book *The Great Transition: Shifting From Fossil Fuels to Solar and Wind Energy* can be freely downloaded from the following link: <http://www.earth-policy.org/books/tgt>

- What is needed is a World War II-type mobilization to produce electric-powered cars that will operate at an equivalent gas cost of \$1 per gallon (Replacing each SUV with a plug-in hybrid could save \$20,000 of oil imports over its lifetime);

6.13 Reforming our food and agricultural systems

The medical journal *The Lancet* recently published a report which aimed at changing the diets of people throughout the world. The commission which produced the report brought together 37 experts in agriculture, environmental sustainability, human health, and political science from 16 countries. Over three years, they developed the “planetary health diet,” which aims to address the global food system’s devastating environmental impact as well as mass malnutrition.

“The food we eat and how we produce it determines the health of people and the planet, and we are currently getting this seriously wrong,” declared Tim Lang, a co-author of the EAT-Lancet Commission and professor at City, University of London. “We need a significant overhaul, changing the global food system on a scale not seen before in ways appropriate to each country’s circumstances.”

“To be healthy,” he explained, “diets must have an appropriate calorie intake and consist of a variety of plant-based foods, low amounts of animal-based foods, unsaturated rather than saturated fats, and few refined grains, highly processed foods, and added sugars.”

“Humanity now poses a threat to the stability of the planet,” co-lead commissioner Johan Rockström of the Stockholm Resilience Center told the *Guardian*. “[This requires] nothing less than a new global agricultural revolution.”

Here are some of the commission’s recommendations:

1. Seek international and national commitment to shift toward healthy diets that feature more plant-based foods - including fruits, vegetables, nuts, seeds, and whole grains - and less animal products.
2. Reorient agricultural priorities from producing high quantities of food to producing healthy food that nurtures human health and supports environmental sustainability.
3. Sustainably intensify food production to increase high-quality output with a series of reforms that include becoming a net carbon sink from 2040 forward to align with the goals of the Paris climate agreement.
4. Strong and coordinated governance of land and oceans, including by implementing a “Half Earth” strategy for biodiversity conservation.
5. At least halve food losses and waste, in line with the U.N. Sustainable Development Goals (SDGs), on both the production side and the consumption side.



Figure 6.31: We should eat more vegetables, fruits, whole grains and nuts, while consuming much less meat and dairy products. Beef is especially damaging to the global environment.



Here are some excerpts from a 16 January 2019 article in The Guardian by Damian Cammeron:

Globally, the diet requires red meat and sugar consumption to be cut by half, while vegetables, fruit, pulses and nuts must double. But in specific places the changes are stark. North Americans need to eat 84% less red meat but six times more beans and lentils. For Europeans, eating 77% less red meat and 15 times more nuts and seeds meets the guidelines.

The diet is a “win-win”, according to the scientists, as it would save at least 11 million people a year from deaths caused by unhealthy food, while preventing the collapse of the natural world that humanity depends upon. With 10 billion people expected to live on Earth by 2050, a continuation of today’s unsustainable diets would inevitably mean even greater health problems and severe global warming.

Unhealthy diets are the leading cause of ill health worldwide, with 800 million people currently hungry, 2 billion malnourished and further 2 billion people overweight or obese. The world’s science academies recently concluded that the food system is broken. Industrial agriculture is also devastating the environment, as forests are razed and billions of cattle emit climate-warming methane.

Future agriculture

When the major glaciers in the Himalayas have melted, they will no longer be able to give India and China summer water supplies; rising oceans will drown much agricultural land; and aridity will reduce the output of many regions that now produce much of the world’s grain. Falling water tables in overdrawn aquifers, and loss of topsoil will add to the problem. We should be aware of the threat of a serious global food crisis in the 21st century if we are to have a chance of avoiding it.

The term *ecological footprint* was introduced by William Rees and Mathis Wackernagel in the early 1990’s to compare demands on the environment with the earth’s capacity to regenerate. In 2015, humanity used environmental resources at such a rate that it would take 1.6 earths to renew them. In other words, we have already exceeded the earth’s carrying capacity. Since eliminating the poverty that characterizes much of the world today will require more resources per capita, rather than less, it seems likely that in the era beyond fossil fuels, the optimum global population will be considerably less than the present population of the world.

Limitations on cropland

In 1944 the Norwegian-American plant geneticist Norman Borlaug was sent to Mexico by the Rockefeller Foundation to try to produce new wheat varieties that might increase Mexico’s agricultural output. Borlaug’s dedicated work on this project was spectacularly successful. He remained with the project for 16 years, and his group made 6,000 individual crossings of wheat varieties to produce high-yield disease-resistant strains.

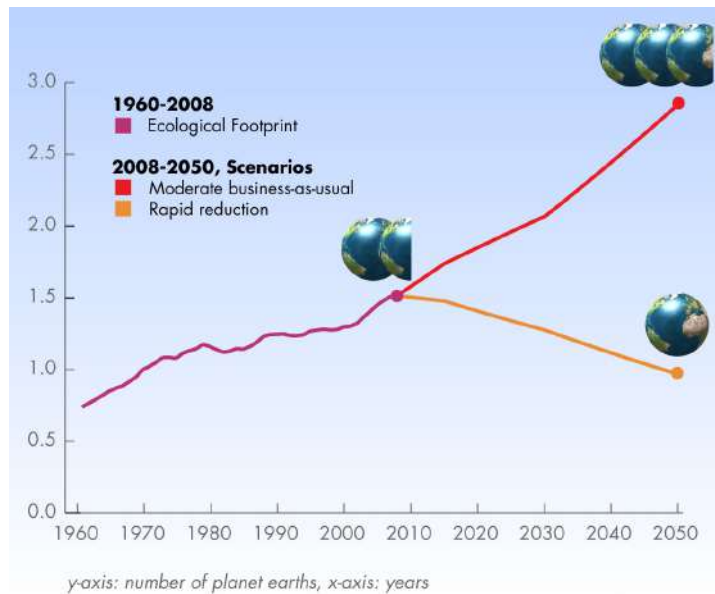


Figure 6.32: **Our present trajectory is completely unsustainable. If we follow it, then by 2050 it would take almost three earths to regenerate our demands on resources.** Source: footprintnetwork.org

In 1963, Borlaug visited India, bringing with him 100 kg. of seeds from each of his most promising wheat strains. After testing these strains in Asia, he imported 450 tons of the Lerma Rojo and Sonora 64 varieties: 250 tons for Pakistan and 200 for India. By 1968, the success of these varieties was so great that school buildings had to be commandeered to store the output. Borlaug's work began to be called a "Green Revolution". In India, the research on high-yield crops was continued and expanded by Prof. M.S. Swaminathan and his co-workers. The work of Green Revolution scientists, such Norman Borlaug and M.S. Swaminathan, has been credited with saving the lives of as many as a billion people.

Despite these successes, Borlaug believes that the problem of population growth is still a serious one. "Africa and the former Soviet republics", Borlaug states, "and the Cerrado, are the last frontiers. After they are in use, the world will have no additional sizable blocks of arable land left to put into production, unless you are willing to level whole forests, which you should not do. So, future food-production increases will have to come from higher yields. And though I have no doubt that yields will keep going up, whether they can go up enough to feed the population monster is another matter. Unless progress with agricultural yields remains very strong, the next century will experience human misery that, on a sheer numerical scale, will exceed the worst of everything that has come before."

With regard to the prospect of increasing the area of cropland, a report by the United Nations Food and Agricultural Organization (Provisional Indicative World Plan for Agricultural Development, FAO, Rome, 1970) states that "In Southern Asia,... in some countries of Eastern Asia, in the Near East and North Africa... there is almost no scope for expanding agricultural area... In the drier regions, it will even be necessary to return to



Figure 6.33: **Forests are the lungs of our planet. They convert CO₂ into organic material and thus remove it from the atmosphere. It is therefore vitally important to protect existing forests and to plant new ones.**

permanent pasture the land that is marginal and submarginal for cultivation. In most of Latin America and Africa south of the Sahara, there are still considerable possibilities for expanding cultivated areas; but the costs of development are high, and it will often be more economical to intensify the utilization of areas already settled.” Thus there is a possibility of increasing the area of cropland in Africa south of the Sahara and in Latin America, but only at the cost of heavy investment and at the additional cost of destruction of tropical rain forests.

Rather than an increase in the global area of cropland, we may encounter a future loss of cropland through soil erosion, salination, desertification, loss of topsoil, depletion of minerals in topsoil, urbanization and failure of water supplies. In China and in the Southwestern part of the United States, water tables are falling at an alarming rate. The Ogallala aquifer (which supplies water to many of the plains states in the central and southern parts of the United States) has a yearly overdraft of 160%.

In the 1950's, both the U.S.S.R and Turkey attempted to convert arid grasslands into wheat farms. In both cases, the attempts were defeated by drought and wind erosion, just as the wheat farms of Oklahoma were overcome by drought and dust in the 1930's. If irrigation of arid lands is not performed with care, salt may be deposited, so that the land is ruined for agriculture. This type of desertification can be seen, for example, in some parts of Pakistan. Another type of desertification can be seen in the Sahel region of Africa, south of the Sahara. Rapid population growth in the Sahel has led to overgrazing,

destruction of trees, and wind erosion, so that the land has become unable to support even its original population.

Especially worrying is a prediction of the International Panel on Climate Change concerning the effect of global warming on the availability of water: According to Model A1 of the IPCC, global warming may, by the 2050's, have reduced by as much as 30% the water available in large areas of world that now a large producers of grain.

Added to the agricultural and environmental problems, are problems of finance and distribution. Famines can occur even when grain is available somewhere in the world, because those who are threatened with starvation may not be able to pay for the grain, or for its transportation. The economic laws of supply and demand are not able to solve this type of problem. One says that there is no "demand" for the food (meaning demand in the economic sense), even though people are in fact starving.²³

Energy-dependence of modern agriculture

A very serious problem with Green Revolution plant varieties is that they require heavy inputs of pesticides, fertilizers and irrigation. Because of this, the use of high-yield varieties contributes to social inequality, since only rich farmers can afford the necessary inputs. Monocultures, such as the Green Revolution varieties may also prove to be vulnerable to future epidemics of plant diseases, such as the epidemic that caused the Irish Potato Famine in 1845. Even more importantly, pesticides, fertilizers and irrigation all depend on the use of fossil fuels. One must therefore ask whether high agricultural yields can be maintained in the future, when fossil fuels are expected to become prohibitively scarce and expensive.

Modern agriculture has become highly dependent on fossil fuels, especially on petroleum and natural gas. This is especially true of production of the high-yield grain varieties introduced in the Green Revolution, since these require especially large inputs of fertilizers, pesticides and irrigation. Today, fertilizers are produced using oil and natural gas, while pesticides are synthesized from petroleum feedstocks, and irrigation is driven by fossil fuel energy. Thus agriculture in the developed countries has become a process where inputs of fossil fuel energy are converted into food calories.

The ratio of the fossil fuel energy inputs to the food calorie outputs depends on how many energy-using elements of food production are included in the accounting. David Pimental and Mario Giampietro of Cornell University estimated in 1994 that U.S. agriculture required 0.7 kcal of fossil fuel energy inputs to produce 1.0 kcal of food energy. However, this figure was based on U.N. statistics that did not include fertilizer feedstocks, pesticide feed-stocks, energy and machinery for drying crops, or electricity, construction and main-

²³<http://www.independent.co.uk/environment/climate-change/society-will-collapse-by-2040-due-to-catastrophic-food-shortages-says-study-10336406.html>
<http://www.truth-out.org/news/item/32131-the-new-climate-normal-abrupt-sea-level-rise-and-predictions-of-civilization-collapse>
<http://www.commondreams.org/views/2015/08/13/dignity-democracy-and-food-interview-frances-moore-lappe>

tenance of farm buildings. A more accurate calculation, including these inputs, gives an input/output ratio of approximately 1.0. Finally, if the energy expended on transportation, packaging and retailing of food is included, Pimental and Giampietro found that the input/output ratio for the U.S. food system was approximately 10, and this figure did not include energy used for cooking.

The Brundtland Report's estimate of the global potential for food production assumes "that the area under food production can be around 1.5 billion hectares (3.7 billion acres - close to the present level), and that the average yields could go up to 5 tons of grain equivalent per hectare (as against the present average of 2 tons of grain equivalent)." In other words, the Brundtland Report assumes an increase in yields by a factor of 2.5. This would perhaps be possible if traditional agriculture could everywhere be replaced by energy-intensive modern agriculture using Green Revolution plant varieties. However, Pimental and Giampietro's studies show that modern energy-intensive agricultural techniques cannot be maintained after fossil fuels have been exhausted or after their use has been discontinued to avoid catastrophic climate change.

At the time when the Brundtland Report was written (1987), the global average of 2 tons of grain equivalent per hectare included much higher yields from the sector using modern agricultural methods. Since energy-intensive petroleum-based agriculture cannot be continued in the post-fossil-fuel era, future average crop yields will probably be much less than 2 tons of grain equivalent per hectare.

The 1987 global population was approximately 5 billion. This population was supported by 3 billion tons of grain equivalent per year. After fossil fuels have been exhausted, the total world agricultural output is likely to be considerably less than that, and therefore the population that it will be possible to support sustainably will probably be considerably less than 5 billion, assuming that our average daily per capita use of food calories remains the same, and assuming that the amount of cropland and pasturage remains the same (1.5 billion hectares cropland, 3.0 billion hectares pasturage).

The Brundtland Report points out that "The present (1987) global average consumption of plant energy for food, seed and animal feed amounts to 6,000 calories daily, with a range among countries of 3,000-15,000 calories, depending on the level of meat consumption." Thus there is a certain flexibility in the global population that can survive on a given total agricultural output. If the rich countries were willing to eat less meat, more people could be supported.²⁴

²⁴<http://www.truth-out.org/news/item/32354-environmentalists-sue-epa-over-dead-zone-in-gulf-of-mexico>

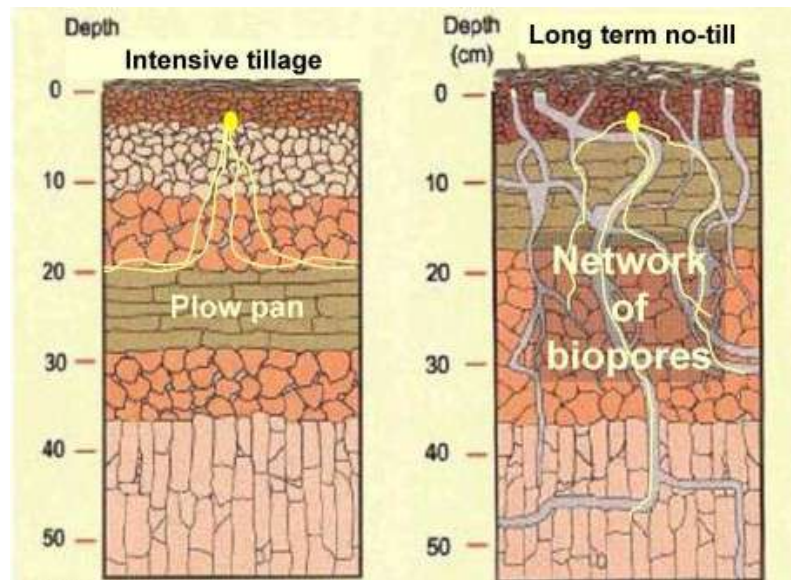


Figure 6.34: Recent research on No-Till Agriculture points to many benefits that could result from this practice, especially higher CO₂ content in the topsoil.

Effects of climate change on agriculture

a) The effect of temperature increase

There is a danger that when climate change causes both temperature increases and increased aridity in regions like the US grain belt, yields will be very much lowered. Of the three main grain types (corn, wheat and rice) corn is the most vulnerable to the direct effect of increases in temperature. One reason for this is the mechanism of pollination of corn: A pollen grain lands on one end of a corn-silk strand, and the germ cell must travel the length of the strand in order to fertilize the kernel. At high temperatures, the corn silk becomes dried out and withered, and is unable to fulfill its biological function. Furthermore, heat can cause the pores on the underside of the corn leaf to close, so that photosynthesis stops.

According to a study made by Mohan Wali and coworkers at Ohio State University, the photosynthetic activity of corn increases until the temperature reaches 20°C. It then remains constant until the temperature reaches 35°C, after which it declines. At 40°C and above, photosynthesis stops altogether.

Scientists in the Phillipines report that the pollination of rice fails entirely at 40°C, leading to crop failures. Wheat yields are also markedly reduced by temperatures in this range.²⁵

b) The effect of decreased rainfall

According to the Stern Report, some of the major grain-producing areas of the world

²⁵<http://ecowatch.com/2015/08/03/heat-wave-iran/>

might lose up to 30% of their rainfall by 2050. These regions include much of the United States, Brazil, the Mediterranean region, Eastern Russia and Belarus, the Middle East, Southern Africa and Australia. Of course possibilities for agriculture may simultaneously increase in other regions, but the net effect of climate change on the world's food supply is predicted to be markedly negative.

c) Unsustainable use of groundwater

It may seem surprising that fresh water can be regarded as a non-renewable resource. However, groundwater in deep aquifers is often renewed very slowly. Sometimes renewal requires several thousand years. When the rate of withdrawal of groundwater exceeds the rate of renewal, the carrying capacity of the resource has been exceeded, and withdrawal of water becomes analogous to mining a mineral. However, it is more serious than ordinary mining because water is such a necessary support for life.

In many regions of the world today, groundwater is being withdrawn faster than it can be replenished, and important aquifers are being depleted. In China, for example, groundwater levels are falling at an alarming rate. Considerations of water supply in relation to population form the background for China's stringent population policy. At a recent lecture, Lester Brown of the Worldwatch Institute was asked by a member of the audience to name the resource for which shortages would most quickly become acute. Most of the audience expected him to name oil, but instead he replied "water".

Lester Brown then cited China's falling water table. He predicted that within decades, China would be unable to feed itself. He said that this would not cause hunger in China itself: Because of the strength of China's economy, the country would be able to purchase grain on the world market. However Chinese purchases of grain would raise the price, and put world grain out of reach of poor countries in Africa. Thus water shortages in China will produce famine in parts of Africa, Brown predicted.

Under many desert areas of the world are deeply buried water tables formed during glacial periods when the climate of these regions was wetter. These regions include the Middle East and large parts of Africa. Water can be withdrawn from such ancient reservoirs by deep wells and pumping, but only for a limited amount of time.

In oil-rich Saudi Arabia, petroenergy is used to drill wells for ancient water and to bring it to the surface. Much of this water is used to irrigate wheat fields, and this is done to such an extent that Saudi Arabia exports wheat. The country is, in effect, exporting its ancient heritage of water, a policy that it may, in time, regret. A similarly short-sighted project is Muammar Qaddafi's enormous pipeline, which will bring water from ancient sub-desert reservoirs to coastal cities.

In the United States, the great Ogallala aquifer is being overdrawn. This aquifer is an enormous stratum of water-saturated sand and gravel under-lying parts of northern Texas, Oklahoma, New Mexico, Kansas, Colorado, Nebraska, Wyoming and South Dakota. The average thickness of the aquifer is about 70 meters. The rate of water withdrawal from the aquifer exceeds the rate of recharge by a factor of eight.

Thus we can see that in many regions, the earth's present population is living on its inheritance of water, rather than its income. This fact, coupled with rapidly increasing pop-

ulations and climate change, may contribute to a very serious food crisis partway through the 21st century.

d) Glacial melting and summer water supplies

The summer water supplies of both China and India are threatened by the melting of glaciers. The Gangotri glacier, which is the principle glacier feeding India's great Ganges River, is reported to be melting at an accelerating rate, and it could disappear within a few decades. If this happens, the Ganges could become seasonal, flowing only during the monsoon season. Chinese agriculture is also threatened by disappearing Himalayan glaciers, in this case those on the Tibet-Quinghai Plateau. The respected Chinese glaciologist Yao Tandong estimates that the glaciers feeding the Yangtze and Yellow Rivers are disappearing at the rate of 7% per year.²⁶

The Indus and Mekong Rivers will be similarly affected by the melting of glaciers. Lack of water during the summer season could have a serious impact on the irrigation.

Mature forests contain vast amounts of sequestered carbon, not only in their trees, but also in the carbon-rich soil of the forest floor. When a forest is logged or burned to make way for agriculture, this carbon is released into the atmosphere.

One fifth of the global carbon emissions are at present due to destruction of forests. This amount is greater than the CO₂ emissions for the world's transportation systems. An intact forest pumps water back into the atmosphere, increasing inland rainfall and benefiting agriculture. By contrast, deforestation, for example in the Amazonian rainforest, accelerates the flow of water back into the ocean, thus reducing inland rainfall. There is a danger that the Amazonian rainforest may be destroyed to such an extent that the region will become much more dry. If this happens, the forest may become vulnerable to fires produced by lightning strikes. This is one of the feedback loops against which the Stern Report warns: the drying and burning of the Amazonian rainforest may become irreversible, greatly accelerating climate change, if destruction of the forest proceeds beyond a certain point.

e) Erosion of topsoil.

Besides depending on an adequate supply of water, food production also depends on the condition of the thin layer of topsoil that covers the world's croplands. This topsoil is being degraded and eroded at an alarming rate: According to the World Resources Institute and the United Nations Environment Programme, "It is estimated that since World War II, 1.2 billion hectares... has suffered at least moderate degradation as a result of human activity. This is a vast area, roughly the size of China and India combined." This area is 27% of the total area currently devoted to agriculture. The report goes on to say that the degradation is greatest in Africa. The risk of topsoil erosion is greatest when marginal land is brought into cultivation, since marginal land is usually on steep hillsides which are vulnerable to water erosion when wild vegetation is removed.

²⁶<http://www.commondreams.org/news/2015/08/04/global-glaciers-melting-three-times-rate-20th-century>

David Pimental and his associates at Cornell University pointed out in 1995 that “Because of erosion-associated loss of productivity and population growth, the per capita food supply has been reduced over the past 10 years and continues to fall. The Food and Agricultural Organization reports that the per capita production of grains which make up 80% of the world’s food supply, has been declining since 1984...During the past 40 years nearly one-third of the world’s cropland (1.5 billion hectares) has been abandoned because of soil erosion and degradation. Most of the replacement has come from marginal land made available by removing forests. Agriculture accounts for 80% of the annual deforestation.”

Topsoil can also be degraded by the accumulation of salt when irrigation water evaporates. The worldwide area of irrigated land has increased from 8 million hectares in 1800 to more than 100 million hectares today. This land is especially important to the world food supply because it is carefully tended and yields are large in proportion to the area. To protect this land from salination, it should be irrigated in such a way that evaporation is minimized.

Finally cropland with valuable topsoil is being lost to urban growth and highway development, a problem that is made more severe by growing populations and by economic growth.

Every year, more than 100,000 square kilometers of rain forest are cleared and burned, an area which corresponds to that of Switzerland and the Netherlands combined. Almost half of the world’s tropical forests have already been destroyed. Ironically, the land thus cleared often becomes unsuitable for agriculture within a few years. Tropical soils may seem to be fertile when covered with luxuriant vegetation, but they are usually very poor in nutrients because of leeching by heavy rains. The nutrients which remain are contained in the vegetation itself; and when the forest cover is cut and burned, the nutrients are rapidly lost.

Often the remaining soil is rich in aluminum oxide and iron oxide. When such soils are exposed to oxygen and sun-baking, a rock-like substance called Laterite is formed.

6.14 Alexandria Ocasio-Cortez and the Green New Deal

Alexandra Ocasio-Cortez (born in 1989) won a stunning victory in the Democratic Party primary election of June 26, 2018. Although outspent by a factor of 18 to 1 by her opponent (Democratic Caucus Chair, Joseph Crowley), she won the primary by 57% to 42%. Her campaign contributions came from small individual donors, while his came in large blocks, from corporations. Ocasio-Cortez calls for the United States to transition by 2035 to an electrical grid running on 100% renewable-energy production and end the use of fossil fuels. She calls healthcare “a human right”, and says: “Almost every other developed nation in the world has universal healthcare. It’s time the United States catch up to the rest of the world in ensuring all people have real healthcare coverage that doesn’t break the bank”.

The Guardian called her victory “one of the biggest upsets in recent American political

history”, and Senator Bernie Sanders commented “She took on the entire local Democratic establishment in her district and won a very strong victory. She demonstrated once again what progressive grassroots politics can do”. The lesson that the US Democratic Party must learn from this is that in order to overthrow Donald Trump’s openly racist and climate-change-denying Republican Party, they must free themselves from the domination of corporate oligarchs, and instead stand for honest government and progressive values.

Even before taking her place in the US House of Representatives, with its newly-won Democratic majority, Alexandria Ocasio-Cortez became the leader of a campaign for a Green New Deal. This program takes its inspiration from the massive Federal government program by which Franklin Delano Roosevelt ended the depression of the 1930’s. FDR’s New Deal built dams, planted forests, and in general to create much needed infrastructure, while at the same time addressing the problem of unemployment by providing jobs. Wikipedia describes FDR’s New Deal as follows:

“The New Deal was a series of programs, public work projects, financial reforms and regulations enacted by President Franklin D. Roosevelt in the United States between 1933 and 1936. It responded to needs for relief, reform and recovery from the Great Depression. Major federal programs included the Civilian Conservation Corps (CCC), the Civil Works Administration (CWA), the Farm Security Administration (FSA), the National Industrial Recovery Act of 1933 (NIRA) and the Social Security Administration (SSA). They provided support for farmers, the unemployed, youth and the elderly. The New Deal included new constraints and safeguards on the banking industry and efforts to re-inflate the economy after prices had fallen sharply. New Deal programs included both laws passed by Congress as well as presidential executive orders during the first term of the presidency of Franklin D. Roosevelt. The programs focused on what historians refer to as the ‘3 Rs’: relief for the unemployed and poor, recovery of the economy back to normal levels and reform of the financial system to prevent a repeat depression.”

Alexandria Ocasio-Cortez believes that the climate emergency that the world now faces is a much more severe emergency than the great depression. Indeed, if quick action is not taken immediately, the long-term effects of catastrophic climate change pose existential threats to human civilization and the biosphere. Therefore she advocates a massive governmental program to create renewable energy infrastructure. Such a program, like FDR’s New Deal, would simultaneously solve the problem of unemployment. Money for the program could be taken from the Pentagon’s obscenely bloated budget. Ocasio-Cortez has also proposed a 70% income tax for the ultra-wealthy.

According to a January 24 2019 article by Robert R. Raymond, “When polled, 92 percent of registered Democratic voters say they support the Green New Deal. But perhaps more importantly, a full 81 percent of all registered voters support it - a number that includes both Republicans and Democrats.”²⁷

²⁷<https://truthout.org/articles/the-democratic-party-is-further-to-the-right-than-most-voters/>



Figure 6.35: Alexandria Ocasio-Cortez. At 29 she is the youngest woman ever to be elected to the US House of Representatives.



Figure 6.36: The Green New Deal advocated by Ocasio-Cortez proposes to use jobs creating renewable energy infrastructure to ensure full employment, in a manner analogous to Roosevelt's New Deal.



Figure 6.37: Members of the Sunrise movement in the office of House Majority Leader Nancy Pelosi, protesting against her lack of support for the Green New Deal.





Figure 6.38: Award-winning author Naomi Klein, speaking at the Sanders Institute in January, 2019.

Naomi Klein on the urgency of the Green New Deal

A recent article by journalist Naomi LaChance describes a meeting at the Sanders Institute (founded by Senator Bernie Sanders and his wife Jane) at which the famous author and activist Naomi Klein and others spoke about the scope and urgency of the Green New Deal. Here are some excerpts from the article:

Progressive journalist and activist Naomi Klein urged sweeping change that tackles the climate crisis, capitalism, racism and economic inequality in tandem on Friday in Burlington, Vt. If that seems challenging, add the fact that the clock is ticking²⁸ and there might not be another chance.

“We need to have started yesterday”, *Klein said at the three-day Sanders Institute Gathering on a panel moderated by environmental activist Bill McKibben. “What all of us who follow the science know is that we just can’t lose these four years”, she said, referring to the presidency of climate change denier Donald Trump. The conference, organized by the think tank founded by Vermont Sen. Bernie Sanders’ wife, Jane, is aimed*

²⁸<https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report>

at forming bold progressive agendas for the future.

Progressives are looking to incoming Democratic New York Rep. Alexandria Ocasio-Cortez for leadership as she galvanizes a grassroots effort by the youth-led climate change group Sunrise Movement²⁹ to reduce fossil fuel dependence. Eighteen members of Congress support the idea of creating a House select committee to look at making a realistic plan by January 2020.

6.15 Media in the service of powerholders

Throughout history, art was commissioned by rulers to communicate, and exaggerate, their power, glory, absolute rightness etc, to the populace. The pyramids gave visual support to the power of the Pharaoh; portraits of rulers are a traditional form of propaganda supporting monarchies; and palaces were built as symbols of power.

Modern powerholders are also aware of the importance of propaganda. Thus the media are a battleground where reformers struggle for attention, but are defeated with great regularity by the wealth and power of the establishment. This is a tragedy because today there is an urgent need to make public opinion aware of the serious problems facing civilization, and the steps that are needed to solve these problems. The mass media could potentially be a great force for public education, but often their role is not only unhelpful - it is negative.

It is certainly possible to find a few television programs and newspaper articles that present the facts about climate change in a realistic way. For example *The Guardian* gives outstanding climate change coverage. However, the mass media could do very much more. One has to conclude that the media are neglecting their great responsibilities at a time of acute crisis for human civilization and the biosphere. The same can be said of our educational systems at both the primary and advanced levels. We urgently need much more public education about the severe dangers that we face today.

6.16 Television as a part of our educational system

In the mid-1950's, television became cheap enough so that ordinary people in the industrialized countries could afford to own sets. During the infancy of television, its power was underestimated. The great power of television is due to the fact that it grips two senses simultaneously, both vision and hearing. The viewer becomes an almost-hypnotized captive of the broadcast.

In the 1950's, this enormous power, which can be used both for good and for ill, was not yet fully apparent. Thus insufficient attention was given to the role of television in education, in setting norms, and in establishing values. Television was not seen as an integral part of the total educational system. It is interesting to compare the educational systems of traditional cultures with those of modern industrial societies.

²⁹<https://www.truthdig.com/articles/will-democrats-back-a-green-new-deal/>

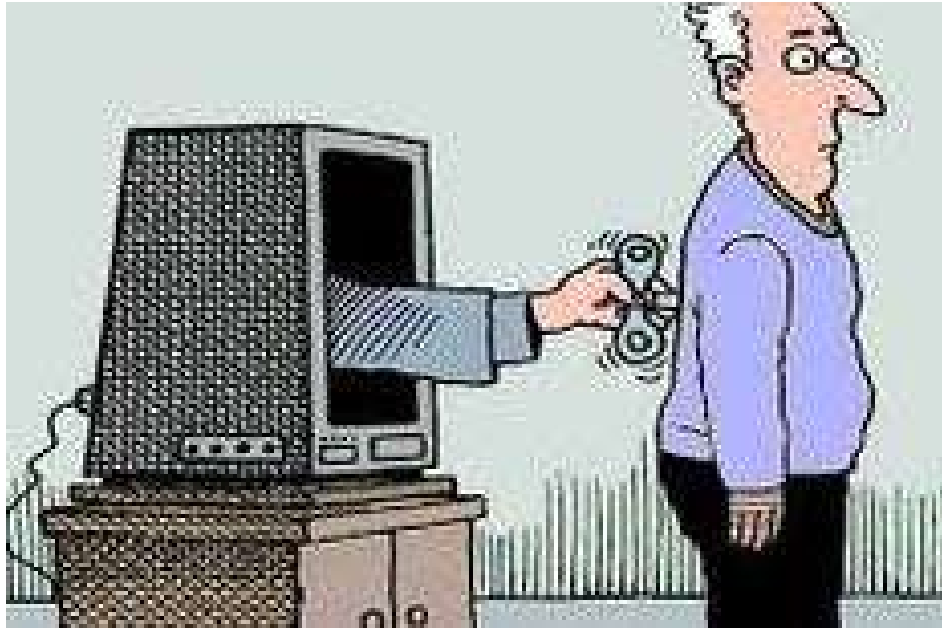


Figure 6.39: **The role of the media.**

In traditional societies, multigenerational families often live together in the same dwelling. In general, there is a great deal of contact between grandparents and grandchildren, with much transmission of values and norms between generations. Old people are regarded with great respect, since they are considered to be repositories of wisdom, knowledge, and culture.

By contrast, modern societies usually favor nuclear families, consisting of only parents and children. Old people are marginalized. They live by themselves in communities or homes especially for the old. Their cultural education knowledge and norms are not valued because they are “out of date”. In fact, during the life of a young person in one of the rapidly-changing industrial societies of the modern world, there is often a period when they rebel against the authority of their parents and are acutely embarrassed by their parents, who are “so old-fashioned that they don’t understand anything”.

Although the intergenerational transmission of values, norms, and culture is much less important in industrial societies than it is in traditional ones, modern young people of the West and North are by no means at a loss over where to find their values, fashions and role models. With every breath, they inhale the values and norms of the mass media. Totally surrounded by a world of television and film images, they accept this world as their own.



Figure 6.40: **Liberty?**

6.17 Neglect of climate change in the mass media

The predicament of humanity today has been called “a race between education and catastrophe”: How do the media fulfil this life-or-death responsibility? Do they give us insight? No, they give us pop music. Do they give us an understanding of the sweep of evolution and history? No, they give us sport. Do they give us an understanding of the ecological catastrophes that threaten our planet because of unrestricted growth of population and industries? No, they give us sit-coms and soap operas. Do they give us unbiased news? No, they give us news that has been edited to conform with the interests of powerful lobbys. Do they present us with the urgent need to leave fossil fuels in the ground? No, they do not, because this would offend the powerholders. Do they tell of the danger of passing tipping points after which human efforts to prevent catastrophic climate change will be useless? No, they give us programs about gardening and making food.

A consumer who subscribes to the “package” of broadcasts sold by a cable company can often search through all 95 channels without finding a single program that offers insight into the various problems that are facing the world today. What the viewer finds instead is a mixture of pro-establishment propaganda and entertainment. Meanwhile the neglected global problems are becoming progressively more severe.

In general, the mass media behave as though their role is to prevent the peoples of the world from joining hands and working to change the world and to save it from thermonuclear war, environmental catastrophes and threatened global famine. The television viewer sits slumped in a chair, passive, isolated, disempowered and stupefied. The future of the world hangs in the balance, the fate of children and grandchildren hangs in the balance, but the television viewer feels no impulse to work actively to change the world or to save it. The Roman emperors gave their people bread and circuses to numb them into political

inactivity. The modern mass media seem to be playing a similar role.

6.18 Climate change denial in mass media

The Wikipedia article on climate change denial describes it with the following words: “Although scientific opinion on climate change is that human activity is extremely likely to be the primary driver of climate change, the politics of global warming have been affected by climate change denial, hindering efforts to prevent climate change and adapt to the warming climate. Those promoting denial commonly use rhetorical tactics to give the appearance of a scientific controversy where there is none.”

It is not surprising that the fossil fuel industry supports, on a vast scale, politicians and mass media that deny the reality of climate change. The amounts of money at stake are vast. If catastrophic climate change is to be avoided, coal, oil and natural gas “assets” worth trillions of dollars must be left in the ground. Giant fossil fuel corporations are desperately attempting to turn these “assets” into cash.

Preventing an ecological apocalypse

Here are some excerpts from an article entitled “**Only Rebellion will prevent an ecological apocalypse**” by George Monbiot, which was published on April 15 2019 in The Guardian³⁰:

No one is coming to save us. Mass civil disobedience is essential to force a political response.

Had we put as much effort into preventing environmental catastrophe as we’ve spent on making excuses for inaction, we would have solved it by now. Everywhere I look, I see people engaged in furious attempts to fend off the moral challenge it presents...

As the environmental crisis accelerates, and as protest movements like YouthStrike4Climate and Extinction Rebellion make it harder not to see what we face, people discover more inventive means of shutting their eyes and shedding responsibility. Underlying these excuses is a deep-rooted belief that if we really are in trouble, someone somewhere will come to our rescue: “they” won’t let it happen. But there is no they, just us.

The political class, as anyone who has followed its progress over the past three years can surely now see, is chaotic, unwilling and, in isolation, strategically incapable of addressing even short-term crises, let alone a vast existential predicament. Yet a widespread and wilful naivety prevails: the belief that voting is the only political action required to change a system. Unless it is

³⁰<https://www.theguardian.com/commentisfree/2019/apr/15/rebellion-prevent-ecological-apocalypse-civil-disobedience>



Figure 6.41: Network administrators have noticed that programs about climate change often have low viewer ratings. Since they see delivering high viewer ratings to their advertisers as their primary duty, these executives seldom allow programs dealing with the danger of catastrophic climate change. The duty to save the earth from environmental catastrophe is neglected for the sake of money. As Al Gore said, “Instead of having a well-informed electorate, we have a well-amused audience”.



accompanied by the concentrated power of protest - articulating precise demands and creating space in which new political factions can grow - voting, while essential, remains a blunt and feeble instrument.

The media, with a few exceptions, is actively hostile. Even when broadcasters cover these issues, they carefully avoid any mention of power, talking about environmental collapse as if it is driven by mysterious, passive forces, and proposing microscopic fixes for vast structural problems. The BBC's Blue Planet Live series exemplified this tendency.

Those who govern the nation and shape public discourse cannot be trusted with the preservation of life on Earth. There is no benign authority preserving us from harm. No one is coming to save us. None of us can justifiably avoid the call to come together to save ourselves...

Predatory delay

Here are some excerpts from a May 3 2019 article by Bill Henderson entitled "Neoliberalism, Solution Aversion, Implicatory Denial and Predatory Delay"³¹:

Looking back at the history, that it's not really a failure of human beings and human nature that's the problem here. It's a hijacking of our political and economic system by the fossil fuel industry and a small number of like-minded people. It was our bad luck that this idea that markets solve all problems and that government should be left to wither away crested just at the moment when it could do the most damage.

Despite the urgent need to reduce greenhouse gas emissions globally if we are to lower the risks of catastrophic climate change, wealthy industrialized nations persist with a widespread public silence on the issue and fail to address climate change. This is despite there being ever more conclusive evidence of its severity. Why is there an undercurrent of inaction, despite the challenge of climate change being ever more daunting? One element is denial.

George Marshall discovered that there has not been a single proposal, debate or even position paper on limiting fossil fuel production put forward during international climate negotiations. From the very outset fossil fuel production lay outside the frame of the discussions and, as with other forms of socially constructed silence, the social norms among the negotiators and policy specialists kept it that way.

Global climate leadership is being redefined. There is a growing recognition that you cannot be a climate leader if you continue to enable new fossil fuel production, which is inconsistent with climate limits. If no major producers step up to stop the expansion of extraction and begin phasing out existing

³¹<https://countercurrents.org/2019/05/03/neoliberalism-solution-aversion-implicatory-denial-and-predatory-delay-bill-henderson/>

fields and mines, the Paris goals will become increasingly difficult to achieve. Wealthy fossil fuel producers have a responsibility to lead, and this must include planning for a just and equitable managed decline of existing production.

The (emissions reduction) curve we've been forced onto bends so steeply, that the pace of victory is part of victory itself. Winning slowly is basically the same thing as losing outright. We cannot afford to pursue past strategies, aimed at limited gains towards distant goals. In the face of both triumphant denialism and predatory delay, trying to achieve climate action by doing the same things, the same old ways, means defeat. It guarantees defeat.

A fast, emergency-scale transition to a post-fossil fuel world is absolutely necessary to address climate change. But this is excluded from consideration by policymakers because it is considered to be too disruptive. The orthodoxy is that there is time for an orderly economic transition within the current short-termist political paradigm. Discussion of what would be safe - less warming than we presently experience - is non-existent. And so we have a policy failure of epic proportions. Policymakers, in their magical thinking, imagine a mitigation path of gradual change, to be constructed over many decades in a growing, prosperous world...

6.19 Showing unsustainable lifestyles in mass media

Television and other mass media contribute indirectly to climate change denial by showing unsustainable lifestyles. Television dramas show the ubiquitous use of gasoline-powered automobiles and highways crowded with them. Just as though there did not exist an urgent need to transform our transportation systems. Motor racing is shown. A program called "Top Gear" tells viewers about the desirability of various automobiles. In general, cyclists are not shown. In television dramas, the protagonists fly to various parts of the world for their holidays. The need for small local self-sustaining communities is not shown.

Advertisements in the mass media urge us to consume more, to fly, to purchase large houses, and to buy gasoline-driven automobiles, just as though such behavior ought to be the norm. Such norms are leading us towards environmental disaster.

6.20 Alternative media

Luckily, the mass media do not have a complete monopoly on public information. With a little effort, citizens who are concerned about the future can find alternative media. These include a large number of independent on-line news services that are supported by subscriber donations rather than by corporate sponsors. *YouTube* videos also represent an extremely important source of public information.



6.21 Outstanding voices calling for climate action

The Guardian

There are exceptions to the general rule that the mass media downplay or completely ignore the climate emergency. The Guardian is a newspaper with absolutely outstanding coverage of all issues related to climate change. No praise can be strong enough for the courageous environmental editorial policy of this famous old British newspaper.

Al Gore

Albert Arnold Gore Jr. served as the 45th Vice President of the United States from January 1985 to January 1993. He then ran for the office of President, but was defeated by George W. Bush in a controversial election whose outcome was finally decided by the US Supreme Court³².

Al Gore is the founder and current Chairman of the Alliance for Climate Protection. He was one of the first important political figures to call attention to the problem of steadily increasing CO₂ levels in the atmosphere and the threat of catastrophic climate change. He produced the highly influential documentary film *An Inconvenient Truth*³³. Because of his important efforts to save the global environment, Al Gore shared the 2007 Nobel Peace Prize with the Intergovernmental Panel on Climate Change.

³²Many people believe that Al Gore won the election.

³³<https://www.youtube.com/watch?v=I-SV13UQXdk>

Al Gore's TED talk: The Case for Optimism on Climate Change

In 2016, Al Gore gave an important talk to a TED audience³⁴. in which he pointed out the an economic tipping point has just been passed. Solar energy and wind energy are now cheaper than energy form fossil fuels. This means that economic forces alone can drive a rapid transition to 100% renewable energy. Investors will realize that renewables represent an unparalleled investment opportunity. **“This is not just about a Green New Deal, this is about a New Deal for the United States of America,”** Ocasio-Cortez said at a press conference in Washington, D.C., on Friday. **“Because in every moment when our country has reached the depths of darkness, in every moment when we were at the brink, at the cusp of an abyss and we did not know if we would be capable of saving ourselves, we have.”**

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Chapter 7

MAJOR CRIMES OF DONALD TRUMP

There is so much wrong with Donald Trump that one hardly knows where to start. He is a bully, braggart, narcissist, racist, mysogenist, habitual liar, and tax evader, in addition to being demonstrably ignorant. He has contempt for both domestic and international law, as well as for the US Constitution. In the words of Michael Moore, he is a “part-time clown and full-time sociopath”. However, it is Trump’s climate change denial, withdrawal from the Paris agreement, and sponsorship of fossil fuels that pose the greatest threats to the future of humans society and the biosphere. The general support of the Republican Party for the fossil fuel industry is the reason why Prof. Noam Chomsky has called the party “the most dangerous organization in history”. In the remainder of this chapter, some of Trump’s other crimes are described.

7.1 Children in cages

Here are some excerpts from the written testimony of Clara Long, Deputy Washington Director (Acting) Senior Researcher, US Program Human Rights Watch. The testimony was submitted to the U.S. House Committee on Oversight and Reform for a hearing on July 19, 2019:

Our in-depth interviews with children revealed that the US Border Patrol is holding many children, including some who are much too young to take care of themselves, in jail-like border facilities for weeks at a time without contact with family members, or regular access to showers, clean clothes, toothbrushes, or proper beds. Many were sick. Many, including children as young as 2 or 3, were separated from adult caretakers without any provisions for their care besides that provided by unrelated older children also being held in detention...

A 7-year-old girl I attempted to interview entered the room silently but burst into tears when we asked whom she traveled with to the US. “My aunt,”



she said, with a keening cry. She was so upset we decided not to attempt to interview her, a situation that happened several times during our visit. A bracelet on her wrist had the words “US parent” and a phone number written in permanent marker. We called the number on the spot and found out that no one had informed her desperate parents where she was being held. Some of the most emotional moments of our visit came witnessing children speak for the first time with their parents on an attorney’s phone.

Trump’s treatment of young children is a crime. It is a crime against human rights.

7.2 Threats of war

Donald Trump has frequently threatened foreign countries with war, even nuclear war. For example, regarding the conflict with North Korea, Trump said “Rocket man is on a suicide mission for himself and his regime. If [the US] is forced to defend itself or its allies, we will have no choice but to totally destroy North Korea”. Trump has also threatened Iran with war. Such threats are a crime under both the Nuremberg Principles and the United Nations Charter.

7.3 Alt-right

The Associated Press gives the following definition of the alt-right movement:

“The ‘alt-right’ or ‘alternative right’ is a name currently embraced by some white supremacists and white nationalists to refer to themselves and their ideology, which emphasizes preserving and protecting the white race in the United States in addition to, or over, other traditional conservative positions such as limited government, low taxes and strict law-and-order. The movement has been described as a mix of racism, white nationalism and populism ... criticizes ‘multiculturalism’ and more rights for non-whites, women, Jews, Muslims, gays, immigrants and other minorities. Its members reject the American democratic ideal that all should have equality under the law regardless of creed, gender, ethnic origin or race.”

Wikipedia states that “The alt-right, an abbreviation of alternative right, is a loosely connected far-right, white supremacist, white nationalist, white separatist, anti-immigration and sometimes antisemitic movement based in the United States. A largely online phenomenon, the alt-right originated in the U.S. during the 2010s although it has since established a presence in various other countries. The term is ill-defined, having been used in different ways by various self-described ‘alt-rightists’, media commentators, and academics.

“In 2010, the American white nationalist Richard B. Spencer launched The Alternative Right webzine to disseminate his ideas. Spencer’s ‘alternative right’ was influenced by earlier forms of American white nationalism, as well as paleoconservatism, the Dark Enlightenment, and the Nouvelle Droite. Critics charged it with being a rebranding of white supremacism. His term was shortened to “alt-right” and popularised by far-right participants of /pol/, the politics board of web forum 4chan. It came to be associated with other white nationalist websites and groups, including Andrew Anglin’s Daily Stormer, Brad Griffin’s Occidental Dissent, and Matthew Heimbach’s Traditionalist Worker Party...

“The alt-right is a white nationalist, biologically racist movement. Part of its membership supports anti-immigrationist policies to ensure a continued white majority in the United States. Others call for the breakup of the country to form a white separatist ethno-state in North America. Some alt-rightists seek to make white nationalism socially respectable in the U.S., while others - known as the ‘1488’ scene - adopt openly white supremacist and neo-Nazi stances. Some alt-rightists are anti-semitic, promoting a conspiracy theory that there is a Jewish plot to bring about white genocide; other alt-rightists view most Jews as members of the white race. The alt-right is anti-feminist, advocates for a more patriarchal society, and intersects with the men’s rights movement and other sectors of the online manosphere...

“Membership was overwhelmingly white and male, with academic and anti-fascist observers linking its growth to deteriorating living standards and prospects, anxieties about the place of white masculinity, and anger at increasingly visible left-wing forms of identity politics like the Black Lives Matter movement. Constituent groups using the “alt-right” label have been characterized as hate groups,[2][3] while alt-right material has been a contributing factor in the radicalization of young white men responsible for a range of far-right



Figure 7.1: Prominent alt-rightists were instrumental in organizing the "Unite the Right" rally in Charlottesville, Virginia in August 2017. Here, rally participants carry Confederate battle flags, Gadsden flags and a Nazi flag.

murders and terrorist attacks in the U.S. since 2014."

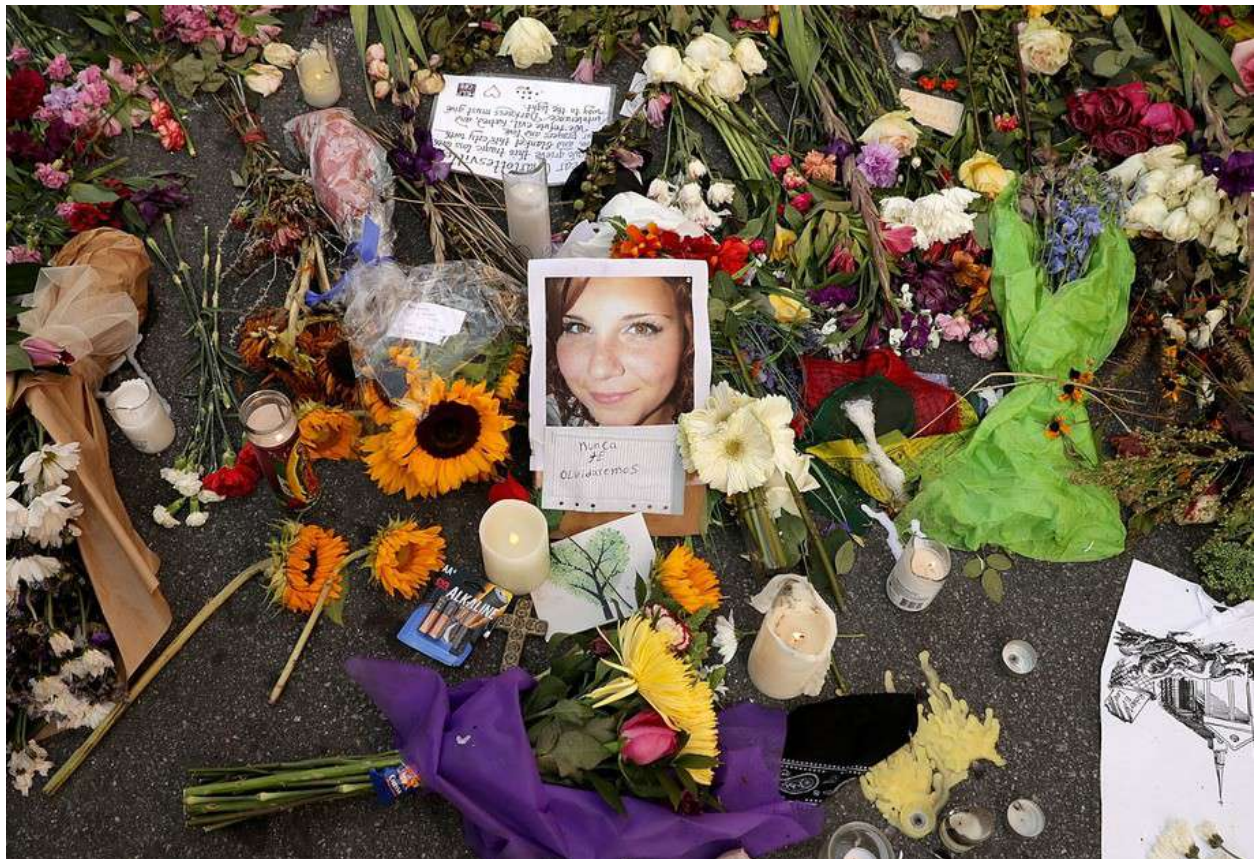


Figure 7.2: Heather Heyer was murdered in 2017 by a white nationalist rally participant in Charlottesville. Since then, mass shootings in Poway, Gilroy, and El Paso and elsewhere have been each linked to white nationalist beliefs.



Figure 7.3: Breitbart News amplified and popularised alt-right ideas under the editorship of “alt-lite” figure Steve Bannon.



Figure 7.4: The alt-right largely rallied behind the presidential candidacy of Donald Trump, although he later distanced himself from the movement.



Figure 7.5: A participant at the Unite the Right rally giving a Nazi salute in front of counter-protesters.



Figure 7.6: The alt-rightist was then punched in an altercation with counter-protesters.



Figure 7.7: Protestors at the 2017 Unite the Right rally, which was promoted by the alt-right. One man carries the logo of Vanguard America, and another has a t-shirt praising German Nazi leader Adolf Hitler.



Figure 7.8: An attendee at the Unite the Right rally carrying a firearm and wearing a Confederate Battle Flag T-shirt.



Figure 7.9: “Trump is Alt-Right with Us.” Anti-Trump protesters highlight what they regard as his links to the alt-right and to historical fascism by dressing as Hitler and Mussolini.

7.4 Proud Boys

Wikipedia states that “The Proud Boys is a far-right neo-fascist organization which admits only men as members and promotes political violence. It is based in the United States and has a presence in Canada, Australia, and the United Kingdom. The group was started in 2016 by Vice Media co-founder and former commentator Gavin McInnes, taking its name from the song ‘Proud of Your Boy’ from the Disney film *Aladdin*. Proud Boys emerged as part of the alt-right, but in early 2017, McInnes began distancing himself from the alt-right, saying the alt-right’s focus is race while his focus is what he defines as ‘Western values’. This re-branding effort intensified after the Unite the Right Rally ¹.

“The group sees men - especially white men - and Western culture as under siege; their views have elements of white genocide conspiracy theory. While the group claims it does not support white supremacist views, its members often participate in racist rallies, events, and organizations. The organization glorifies violence, and members engage in violence at

¹Wikipedia describes this event as follows: “The Unite the Right rally was a white supremacist rally that occurred in Charlottesville, Virginia, from August 11 to 12, 2017. Protesters were members of the far-right and included self-identified members of the alt-right, neo-Confederates, neo-fascists,[13] white nationalists, neo-Nazis, Klansmen, and various right-wing militias. The marchers chanted racist and antisemitic slogans, carried semi-automatic rifles, Nazi and neo-Nazi symbols (such as the swastika, Odal rune, Black Sun, and Iron Cross), the Valknut, Confederate battle flags, Deus Vult crosses, flags and other symbols of various past and present anti-Muslim and antisemitic groups.”



Figure 7.10: Proud Boys founder Gavin McInnes.

events it attends; the Southern Poverty Law Center (SPLC) has called it an ‘alt-right fight club’.

“The organization has been described as a hate group by the Southern Poverty Law Center and NPR’s *The Takeaway*, and Spencer, McInnes, and the Proud Boys have been described as hipster racists by Vox and Media Matters for America. McInnes says victim mentality of women and other historically oppressed groups is unhealthy: ‘There is an incentive to be a victim. It is cool to be a victim.’ He sees white men and Western culture as ‘under siege’ and described criticism of his ideas as “victim blaming”. Their views have elements of white genocide conspiracy theory. The group is part of the ‘alt lite’ and it is ‘overtly Islamophobic’...

“The organization glorifies political violence against leftists, re-enacting political assassinations, wearing shirts that praise Augusto Pinochet’s murders of leftists, and participating directly in political violence. McInnes has said ‘I want violence, I want punching in the face. I’m disappointed in Trump supporters for not punching enough.’ He stated, ‘We don’t start fights [...] but we will finish them.’ Heidi Beirich, the Intelligence Project director for the Southern Poverty Law Center, said that this form of intentional aggression was not common among far-right groups in the past; she said: ‘We’re going to show up and we’re intending to get in fights, that’s a new thing.’ In August 2018, Twitter shut down the official account for the group, as well as McInnes’ account, under its policy prohibiting violent extremist groups; at the time, the group’s profile photo was a member punching a counter-protester.



Figure 7.11: A member of Proud Boys.

7.5 Evangelicals

Here is an excerpt from a December 31, 2018 article in the New York Times by Katherine Stewart:

The month before the 2018 midterms, a thousand theaters screened “The Trump Prophecy,” a film that tells the story of Mark Taylor, a former firefighter who claims that God told him in 2011 that Donald Trump would be elected president.

At a critical moment in the film, just after the actor representing Mr. Taylor collapses in the flashing light of an epiphany, he picks up a Bible and turns to the 45th chapter of the book of Isaiah, which describes the anointment of King Cyrus by God. In the next scene, we hear Mr. Trump being interviewed on “The 700 Club,” a popular Christian television show.

As Lance Wallnau, an evangelical author and speaker who appears in the film, once said, “I believe the 45th president is meant to be an Isaiah 45 Cyrus,” who will “restore the crumbling walls that separate us from cultural collapse.”

Cyrus, in case you’ve forgotten, was born in the sixth century B.C.E. and became the first emperor of Persia. Isaiah 45 celebrates Cyrus for freeing a population of Jews who were held captive in Babylon. Cyrus is the model for a nonbeliever appointed by God as a vessel for the purposes of the faithful.

The identification of the 45th president with an ancient Middle Eastern

potentate isn't a fringe thing. "The Trump Prophecy" was produced with the help of professors and students at Liberty University, whose president, Jerry Falwell Jr., has been instrumental in rallying evangelical support for Mr. Trump. Jeanine Pirro of Fox News has picked up on the meme, as has Ron Dermer, the Israeli ambassador to the United States, among many others.

As the Trump presidency falls under siege on multiple fronts, it has become increasingly clear that the so-called values voters will be among the last to leave the citadel. A lot of attention has been paid to the supposed paradox of evangelicals backing such an imperfect man, but the real problem is that our idea of Christian nationalism hasn't caught up with the reality. We still buy the line that the hard core of the Christian right is just an interest group working to protect its values. But what we don't get is that Mr. Trump's supposedly anti-Christian attributes and anti-democratic attributes are a vital part of his attraction.

Today's Christian nationalists talk a good game about respecting the Constitution and America's founders, but at bottom they sound as if they prefer autocrats to democrats. In fact, what they really want is a king. 'It is God that raises up a king,' according to Paula White, a prosperity gospel preacher who has advised Mr. Trump.

Ralph Drollinger, who has led weekly Bible study groups in the White House attended by Vice President Mike Pence and many other cabinet members, likes the word "king" so much that he frequently turns it into a verb. "Get ready to king in our future lives," he tells his followers. "Christian believers will - soon, I hope - become the consummate, perfect governing authorities!"

The great thing about kings like Cyrus, as far as today's Christian nationalists are concerned, is that they don't have to follow rules. They are the law. This makes them ideal leaders in paranoid times.



Figure 7.12: Apparently insanity rules the United States today. The Evangelical Right believes that Trump was sent by God to be King, despite the fact that, according to Glenn Kessler, author of the Washington Post’s Fact Checker column, Trump told an average of 15 lies per day in 2018, bringing the total number of documented lies since he took office in January 2017 to 7,645. But neither Trump’s lies, nor his racism and mysogeny, nor his cruel authorization of imprisonment of very young children and even babies, are his worst crimes. His most serious offense is a crime against human civilization and the biosphere: his support for coal, his climate change denial, his sabotaging of renewable energy, and his withdrawal from the Paris agreement. These actions, and support for them by Republicans, caused Noam Chomsky to call the Republican Party “the most dangerous organization in history”.



Figure 7.13: An artist's impression of Trump's National Security Advisor John Bolton.



Figure 7.14: Stars and stripes.



Figure 7.15: Anti-Mexican language used by Trump is very similar to the language used by the El Paso mass murderer. A recent article *Ex-FBI Official, FBI reluctant to probe white supremacists because Trump considers them his base*, quotes Dave Gomez as saying “There’s some reluctance among agents to bring forth an investigation that targets what the president perceives as his base.”



Figure 7.16: Family members mourning the victims of the El Paso murders.



Figure 7.17: A woman lights a candle at a makeshift memorial outside Walmart, near the scene of a mass shooting which left 22 people dead, on August 4, 2019, in El Paso, Texas.

7.6 The El Paso mass murders

On the morning of August 3, 2019, 21-year-old Patrick Wood Crusius, a Republican follower of Donald Trump, walked into a Walmart in El Paso Texas. carrying an AK-47 automatic weapon. He opened fire on the largely Latino customers, killing 22 people and seriously injuring 24 others. In a manifesto, which he published on the Internet just before the murders, he wrote “In general, I support the Christchurch shooter and his manifesto. This attack is a response to the Hispanic invasion of Texas. They are the instigators, not me. I am simply defending my country from cultural and ethnic replacement brought on by an invasion.” The language and ideas used by Crucius are similar to those of Donald Trump, who often speaks of a Mexican invasion.

The following day, there was another mass shooting, this time in Dayton, Ohio. Again an automatic attack rifle was used. Nine people were killed.

Between January and February, 2019, President Donald Trump’s Facebook page ran about 2,200 ads referring to immigration as an “invasion”.

7.7 Right-wing parties in Europe and elsewhere.

Brexit

Across the developed world, the reaction to threatened migration of refugees from climate change has been less than generous, to say the least. The recent decision of Britain to leave the European Union was motivated largely by the fear of British workers that EU laws would force their country to accept large numbers of refugees.

Swings to the right in Europe

In Germany, Angela Merkel’s generous policies towards refugees have cost her votes, while an openly racist party, the Alternative for Germany (AfD) party, has gained in strength. Frauke Petry, 40, the party’s leader, has said border guards might need to turn guns on anyone crossing a frontier illegally. The party’s policy platform says “Islam does not belong in Germany” and calls for a ban on the construction of mosques.

In September, 2017, eight people from the neo-Nazi Freital Group were put on trial in Dresden for bomb attacks on homes for asylum applicants. Hundreds of similar assaults occur in Germany every year, but they had never before been tried as terrorism in a federal court.

In the German election, which took place on Sunday, October 1, 2017, Angela Merkel won a fourth term as Chancellor, but her party won only 33% of the votes, a percentage much reduced from the 41% won in the election of 2013. Angela Merkel was paying a high price for her refugee-friendly policies.

Meanwhile the far right anti-immigration AfD party made a historic breakthrough, winning 13.5% of the vote, thus becoming the first overtly nationalist party to sit in the

Bundestag in 60 years. The Greens have already complained that “Nazis have returned to parliament”. In fact, members of the AfD party have begun to say that Germans should stop being ashamed of their country’s Nazi past.

In France, the National Front is a nationalist party that uses populist rhetoric to promote its anti-immigration and anti-European Union positions. The party favors protectionist economic policies and would clamp down on government benefits for immigrants.

Similarly, in the Netherlands, the anti-European Union, anti-Islam Party for Freedom has called for closing all Islamic schools and recording the ethnicity of all Dutch citizens. In early November, the party was leading in polls ahead of next year’s parliamentary elections.

Other far-right anti-immigrant parties in Europe include Golden Dawn (Greece), Jobbik (Hungary), Sweden Democrats (Sweden), Freedom Party (Austria), and People’s Party - Our Slovakia (Slovakia). All of these parties have gained in strength because of the widespread fear of immigration.

Populism in the United States

The election of Donald Trump, who ran for President in 2016 on an openly racist and anti-immigrant platform, can also be seen as the result of fear of immigration, especially on the part of industrial workers.

A more humane response to the refugee crisis

In the long-term future, climate change will make the refugee crisis much more severe. Heat and drought will make large regions of the world uninhabitable, and will threaten many populations with famine. The severity of the refugee crisis will depend on how quickly we reduce greenhouse gas emissions.

While making many parts of the world uninhabitable, long-term climate change will make other regions more suitable for human habitation and agriculture. For example, farming will become more possible in Siberia, Greenland, the Canadian Arctic, Alaska and Patagonia. A humane response to the refugee crisis could include the generous opening of these regions to refugees.

The global population of humans is currently increasing by almost a billion people every decade. Global population must be stabilized, and in the long run, gradually reduced. Money currently wasted (or worse than wasted) on armaments could be used instead to promote universal primary health care, and with it, universal access to the knowledge and materials needed for family planning.

Finally, reduced consumption of meat, particularly beef, would shorten the food chain thus make more food available for famine relief.

7.8 Trump copies Hitler's rhetoric

Book review: *When at Times the Mob Is Swayed*

Below are some quotations from an article by Steven Rosenfeld, published by *Common Dreams* on Friday, August 9, 2019. Rosenfeld's article is a review of a book by Bert Neuborne entitled *When at Times the Mob Is Swayed: A Citizen's Guide to Defending Our Republic*.

Neuborne doesn't make this comparison [between Trump and Hitler] lightly. His 55-year career began by challenging the constitutionality of the Vietnam War in the 1960s. He became the ACLU's national legal director in the 1980s under Ronald Reagan. He was founding legal director of the Brennan Center for Justice at New York University Law School in the 1990s. He has been part of more than 200 Supreme Court cases and Holocaust reparation litigation.

"Why does an ignorant, narcissistic buffoon like Trump trigger such anxiety? Why do so many Americans feel it existentially (not just politically) important to resist our forty-fifth president?" he writes. "Partly it's just aesthetics. Trump is such a coarse and appalling man that it's hard to stomach his presence in Abraham Lincoln's house. But that's not enough to explain the intensity of my dread. LBJ was coarse. Gerald Ford and George W. Bush were dumb as rocks. Richard Nixon was an anti-Semite. Bill Clinton's mistreatment of women dishonored his office. Ronald Reagan was a dangerous ideologue. I opposed each of them when they appeared to exceed their constitutional powers. But I never felt a sense of existential dread. I never sensed that the very existence of a tolerant democracy was in play."

A younger Trump, according to his first wife's divorce filings, kept and studied a book translating and annotating Adolf Hitler's pre-World War II speeches in a locked bedside cabinet, Neuborne noted. The English edition of *My New Order*, published in 1941, also had analyses of the speeches' impact on his era's press and politics. "Ugly and appalling as they are, those speeches are masterpieces of demagogic manipulation," Neuborne says.

"Watching Trump work his crowds, though, I see a dangerously manipulative narcissist unleashing the demagogic spells that he learned from studying Hitler's speeches - spells that he cannot control and that are capable of eroding the fabric of American democracy," Neuborne says. "You see, we've seen what these rhetorical techniques can do. Much of Trump's rhetoric - as a candidate and in office - mirrors the strategies, even the language, used by Adolf Hitler in the early 1930s to erode German democracy."

Many Americans may seize or condemn Neuborne's analysis, which has more than 20 major points of comparison. The author repeatedly says his goal is not "equating" the men - as "it trivializes Hitler's obscene crimes to compare them to Trump's often pathetic foibles."

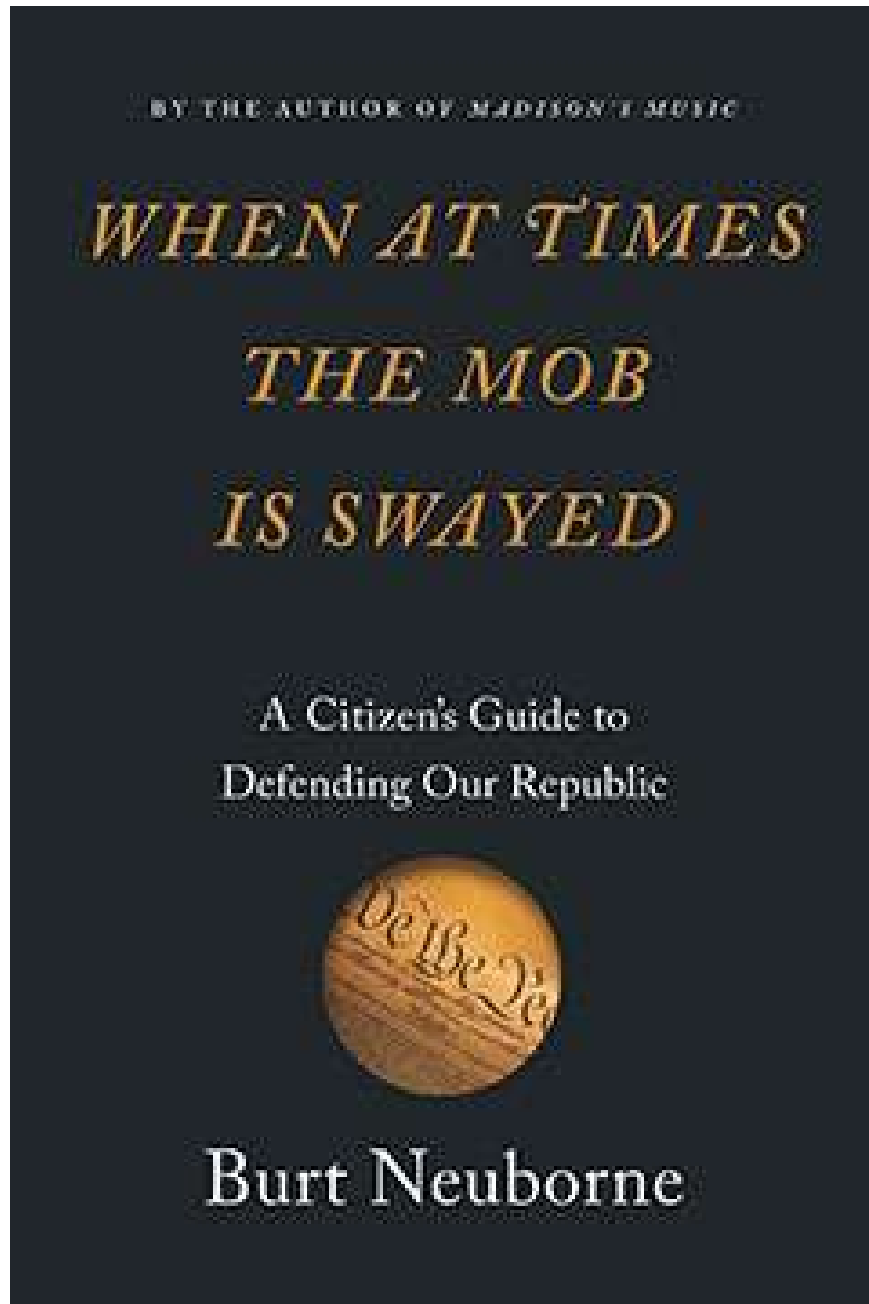


Figure 7.18: Burt Neuborne's brilliant book on the current crisis of American democracy is a warning that we must take very seriously.



Indeed, the book has a larger frame: whether federal checks and balances - Congress, the Supreme Court, the Electoral College - can contain the havoc that Trump thrives on and the Republican Party at large has embraced. But the Trump-Hitler compilation is a stunning warning, because, as many Holocaust survivors have said, few Germans or Europeans expected what unfolded in the years after Hitler amassed power.

Here's how Neuborne introduces this section. Many recent presidents have been awful, "But then there was Donald Trump, the only president in recent American history to openly despise the twin ideals - individual dignity and fundamental equality - upon which the contemporary United States is built. When you confront the reality of a president like Trump, the state of both sets of brakes - internal [constitutional] and external [public resistance] - become hugely important because Donald Trump's political train runs on the most potent and dangerous fuel of all: a steady diet of fear, greed, loathing, lies, and envy. It's a toxic mixture that has destroyed democracies before, and can do so again.

"Give Trump credit," he continues. "He did his homework well and became the twenty-first-century master of divisive rhetoric. We're used to thinking of Hitler's Third Reich as the incomparably evil tyranny that it undoubtedly was. But Hitler didn't take power by force. He used a set of rhetorical tropes codified in Trump's bedside reading that persuaded enough Germans to welcome Hitler as a populist leader. The Nazis did not overthrow the Weimar Republic. It fell into their hands as the fruit of Hitler's satanic ability to mesmerize enough Germans to trade their birthright for a pottage of scapegoating, short-term economic gain, xenophobia, and racism. It could happen here."

Twenty points of similarity

Neuborne lists the following points of similarity between early Hitler and Trump:

1. Neither was elected by a majority. Trump lost the popular vote by 2.9 million votes, receiving votes by 25.3 percent of all eligible American voters. "That's just a little less than the percentage of the German electorate that turned to the Nazi Party in 1932-33," Neuborne writes. "Unlike the low turnouts in the United States, turnout in Weimar Germany averaged just over 80 percent of eligible voters." He continues, "Once installed as a minority chancellor in January 1933, Hitler set about demonizing his political opponents, and no one - not the vaunted, intellectually brilliant German judiciary; not the respected, well-trained German police; not the revered, aristocratic German military; not the widely admired, efficient German government bureaucracy; not the wealthy, immensely powerful leaders of German industry; and not the powerful center-right political leaders of the Reichstag - mounted a serious effort to stop him."

2. Both found direct communication channels to their base. By 1936's Olympics, Nazi narratives dominated German cultural and political life. "How on earth did Hitler pull it off? What satanic magic did Trump find in Hitler's speeches?" Neuborne asks. He addresses Hitler's extreme rhetoric soon enough, but notes that Hitler found a direct communication pathway - the Nazi Party gave out radios with only one channel, tuned to Hitler's voice, bypassing Germany's news media. Trump has an online equivalent.

"Donald Trump's tweets, often delivered between midnight and dawn, are the twenty-first century's technological embodiment of Hitler's free plastic radios," Neuborne says. "Trump's Twitter account, like Hitler's radios, enables a charismatic leader to establish and maintain a personal, unfiltered line of communication with an adoring political base of about 30-40 percent of the population, many (but not all) of whom are only too willing, even anxious, to swallow Trump's witches' brew of falsehoods, half-truths, personal invective, threats, xenophobia, national security scares, religious bigotry, white racism, exploitation of economic insecurity, and a never ending-search for scapegoats."

3. Both blame others and divide on racial lines. As Neuborne notes, "Hitler used his single-frequency radios to wax hysterical to his adoring base about his pathological racial and religious fantasies glorifying Aryans and demonizing Jews, blaming Jews (among other racial and religious scapegoats) for German society's ills." That is comparable to "Trump's tweets and public statements, whether dealing with black-led demonstrations against police violence, white-led racist mob violence, threats posed by undocumented aliens, immigration policy generally, protests by black and white professional athletes, college admission policies, hate speech, even response to hurricane damage in Puerto Rico," he says. Again and again, Trump uses "racially tinged messages calculated to divide whites from people of color."
4. Both relentlessly demonize opponents. "Hitler's radio harangues demonized his domestic political opponents, calling them parasites, criminals, cockroaches, and various categories of leftist scum," Neuborne notes. "Trump's tweets and speeches similarly demonize his political opponents. Trump talks about the country being 'infested' with dangerous aliens of color. He fantasizes about jailing Hillary Clinton, calls Mexicans rapists, refers to 'shithole countries,' degrades anyone who disagrees with him, and dreams of uprooting thousands of allegedly disloyal bureaucrats in the State Department, the Environmental Protection Agency, the FBI, and the CIA, who he calls 'the deep state' and who, he claims, are sabotaging American greatness."

5. They unceasingly attack objective truth. “Both Trump and Hitler maintained a relentless assault on the very idea of objective truth,” he continues. “Each began the assault by seeking to delegitimize the mainstream press. Hitler quickly coined the epithet *Lügenpresse* (literally ‘lying press’) to denigrate the mainstream press. Trump uses a paraphrase of Hitler’s lying press epithet - ‘fake news’ - cribbed, no doubt, from one of Hitler’s speeches. For Trump, the mainstream press is a ‘lying press’ that publishes ‘fake news.’” Hitler attacked his opponents as spreading false information to undermine his positions, Neuborne says, just as Trump has attacked “elites” for disseminating false news, “especially his possible links to the Kremlin.”
6. They relentlessly attack mainstream media. Trump’s assaults on the media echo Hitler’s, Neuborne says, noting that he “repeatedly attacks the ‘failing New York Times,’ leads crowds in chanting ‘CNN sucks,’ [and] is personally hostile to most reporters.” He cites the White House’s refusal to fly the flag at half-mast after the murder of five journalists in Annapolis in June 2018, Trump’s efforts to punish CNN by blocking a merger of its corporate parent, and trying to revoke federal Postal Service contracts held by Amazon, which was founded by Jeff Bezos, who also owns the Washington Post.
7. Their attacks on truth include science. Neuborne notes, “Both Trump and Hitler intensified their assault on objective truth by deriding scientific experts, especially academics who question Hitler’s views on race or Trump’s views on climate change, immigration, or economics. For both Trump and Hitler, the goal is (and was) to eviscerate the very idea of objective truth, turning everything into grist for a populist jury subject to manipulation by a master puppeteer. In both Trump’s and Hitler’s worlds, public opinion ultimately defines what is true and what is false.”
8. Their lies blur reality - and supporters spread them. “Trump’s pathological penchant for repeatedly lying about his behavior can only succeed in a world where his supporters feel free to embrace Trump’s ‘alternative facts’ and treat his hyperbolic exaggerations as the gospel truth,” Neuborne says. “Once Hitler had delegitimized the mainstream media by a series of systematic attacks on its integrity, he constructed a fawning alternative mass media designed to reinforce his direct radio messages and enhance his personal power. Trump is following the same path, simultaneously launching bitter attacks on the mainstream press while embracing the so-called alt-right media, co-opting both Sinclair Broadcasting and the Rupert Murdoch-owned Fox Broadcasting Company as, essentially, a Trump Broadcasting Network.”

9. Both orchestrated mass rallies to show status. "Once Hitler had cemented his personal communications link with his base via free radios and a fawning media and had badly eroded the idea of objective truth, he reinforced his emotional bond with his base by holding a series of carefully orchestrated mass meetings dedicated to cementing his status as a charismatic leader, or Führer," Neuborne writes. "The powerful personal bonds nurtured by Trump's tweets and Fox's fawning are also systematically reinforced by periodic, carefully orchestrated mass rallies (even going so far as to co-opt a Boy Scout Jamboree in 2017), reinforcing Trump's insatiable narcissism and his status as a charismatic leader."
10. They embrace extreme nationalism. "Hitler's strident appeals to the base invoked an extreme version of German nationalism, extolling a brilliant German past and promising to restore Germany to its rightful place as a preeminent nation," Neuborne says. "Trump echoes Hitler's jingoistic appeal to ultranationalist fervor, extolling American exceptionalism right down to the slogan 'Make America Great Again,' a paraphrase of Hitler's promise to restore German greatness."
11. Both made closing borders a centerpiece. "Hitler all but closed Germany's borders, freezing non-Aryan migration into the country and rendering it impossible for Germans to escape without official permission. Like Hitler, Trump has also made closed borders a centerpiece of his administration," Neuborne continues. "Hitler barred Jews. Trump bars Muslims and seekers of sanctuary from Central America. When the lower courts blocked Trump's Muslim travel ban, he unilaterally issued executive orders replacing it with a thinly disguised substitute that ultimately narrowly won Supreme Court approval under a theory of extreme deference to the president."
12. They embraced mass detention and deportations. "Hitler promised to make Germany free from Jews and Slavs. Trump promises to slow, stop, and even reverse the flow of non-white immigrants, substituting Muslims, Africans, Mexicans, and Central Americans of color for Jews and Slavs as scapegoats for the nation's ills. Trump's efforts to cast dragnets to arrest undocumented aliens where they work, live, and worship, followed by mass deportation... echo Hitler's promise to defend Germany's racial identity," he writes, also noting that Trump has "stooped to tearing children from their parents [as Nazis in World War II would do] to punish desperate efforts by migrants to find a better life."
13. Both used borders to protect selected industries. "Like Hitler, Trump seeks to use national borders to protect his favored national interests, threatening to ignite protectionist trade wars with Europe, China, and

Japan similar to the trade wars that, in earlier incarnations, helped to ignite World War I and World War II,” Neuborne writes. “Like Hitler, Trump aggressively uses our nation’s political and economic power to favor selected American corporate interests at the expense of foreign competitors and the environment, even at the price of international conflict, massive inefficiency, and irreversible pollution [climate change].”

14. They cemented their rule by enriching elites. “Hitler’s version of fascism shifted immense power - both political and financial - to the leaders of German industry. In fact, Hitler governed Germany largely through corporate executives,” he continues. “Trump has also presided over a massive empowerment - and enrichment - of corporate America. Under Trump, large corporations exercise immense political power while receiving huge economic windfalls and freedom from regulations designed to protect consumers and the labor force. Hitler despised the German labor movement, eventually destroying it and imprisoning its leaders. Trump also detests strong unions, seeking to undermine any effort to interfere with the ‘prerogatives of management.’”
15. Both rejected international norms. “Hitler’s foreign policy rejected international cooperation in favor of military and economic coercion, culminating in the annexation of the Sudetenland, the phony Hitler-Stalin nonaggression pact, the invasion of Czechoslovakia, and the horrors of global war,” Neuborne notes. “Like Hitler, Trump is deeply hostile to multinational cooperation, withdrawing from the Trans-Pacific Partnership, the Paris Agreement on climate change, and the nuclear agreement with Iran, threatening to withdraw from the North American Free Trade Agreement, abandoning our Kurdish allies in Syria...”
16. They attack domestic democratic processes. “Hitler attacked the legitimacy of democracy itself, purging the voting rolls, challenging the integrity of the electoral process, and questioning the ability of democratic government to solve Germany’s problems,” Neuborne notes. “Trump has also attacked the democratic process, declining to agree to be bound by the outcome of the 2016 elections when he thought he might lose, supporting the massive purge of the voting rolls allegedly designed to avoid (nonexistent) fraud, championing measures that make it harder to vote, tolerating - if not fomenting - massive Russian interference in the 2016 presidential election, encouraging mob violence at rallies, darkly hinting at violence if Democrats hold power, and constantly casting doubt on the legitimacy of elections unless he wins.”
17. Both attack the judiciary and rule of law. “Hitler politicized and eventually destroyed the vaunted German justice system. Trump also seeks to

turn the American justice system into his personal playground,” Neuborne writes. “Like Hitler, Trump threatens the judicially enforced rule of law, bitterly attacking American judges who rule against him, slyly praising Andrew Jackson for defying the Supreme Court, and abusing the pardon power by pardoning an Arizona sheriff found guilty of criminal contempt of court for disobeying federal court orders to cease violating the Constitution.”

18. Both glorify the military and demand loyalty oaths. “Like Hitler, Trump glorifies the military, staffing his administration with layers of retired generals (who eventually were fired or resigned), relaxing control over the use of lethal force by the military and the police, and demanding a massive increase in military spending,” Neuborne writes. Just as Hitler “imposed an oath of personal loyalty on all German judges” and demanded courts defer to him, “Trump’s already gotten enough deference from five Republican [Supreme Court] justices to uphold a largely Muslim travel ban that is the epitome of racial and religious bigotry.” Trump has also demanded loyalty oaths. “He fired James Comey, a Republican appointed in 2013 as FBI director by President Obama, for refusing to swear an oath of personal loyalty to the president; excoriated and then sacked Jeff Sessions, his handpicked attorney general, for failing to suppress the criminal investigation into... Trump’s possible collusion with Russia in influencing the 2016 elections; repeatedly threatened to dismiss Robert Mueller, the special counsel carrying out the investigation; and called again and again for the jailing of Hillary Clinton, his 2016 opponent, leading crowds in chants of ‘lock her up.’” A new chant, “send her back,” has since emerged at Trump rallies directed at non-white Democratic congresswomen.
19. They proclaim unchecked power. “Like Hitler, Trump has intensified a disturbing trend that predated his administration of governing unilaterally, largely through executive orders or proclamations,” Neuborne says, citing the Muslim travel ban, trade tariffs, unraveling of health and environmental safety nets, ban on transgender military service, and efforts to end President Obama’s protection for Dreamers. “Like Hitler, Trump claims the power to overrule Congress and govern all by himself. In 1933, Hitler used the pretext of the Reichstag fire to declare a national emergency and seize the power to govern unilaterally. The German judiciary did nothing to stop him. German democracy never recovered. When Congress refused to give Trump funds for his border wall even after he threw a tantrum and shut down the government, Trump, like Hitler, declared a phony national emergency and claimed the power to ignore Congress,” Neuborne continues. “Don’t count on the Supreme Court to stop him. Five justices gave the game away on the President’s unilateral travel ban.

They just might do the same thing on the border wall.” It did in late July, ruling that Trump could divert congressionally appropriated funds from the Pentagon budget - undermining constitutional separation of powers.

20. Both relegate women to subordinate roles. “Finally,” writes Neuborne, “Hitler propounded a misogynistic, stereotypical view of women, valuing them exclusively as wives and mothers while excluding them from full participation in German political and economic life. Trump may be the most openly misogynist figure ever to hold high public office in the United States, crassly treating women as sexual objects, using nondisclosure agreements and violating campaign finance laws to shield his sexual misbehavior from public knowledge, attacking women who come forward to accuse men of abusive behavior, undermining reproductive freedom, and opposing efforts by women to achieve economic equality.”

Suggestions for further reading

1. Geoff Harris. *The Dark Side of Europe: The Extreme Right Today*, Edinburgh University Press; New edition, (1994).
2. Luciano Cheles, Ronnie Ferguson, and Michalina Vaughan. *The Far Right in Western and Eastern Europe*, Longman Publishing Group; 2nd edition, (1995).
3. Herbert Kitschelt. *The Radical Right in Western Europe: A Comparative Analysis*, University of Michigan Press; Reprint edition, (1997).
4. Martin Schain, Aristide Zolberg, and Patrick Hossay, editors. *Shadows Over Europe: The Development and Impact of the Extreme Right in Western Europe*, Palgrave Macmillan; 1st edition, (2002).
5. Robert S. Griffin. *The Fame of a Dead Man's Deeds: An Up-Close Portrait of White Nationalist William Pierce*, Authorhouse, (2001).
6. Jeffrey Kaplan and Tore Bjorgo. *Nation and Race: The Developing Euro-American Racist Subculture*, Northeastern University Press, (1998).
7. Mattias Gardell. *Gods of the Blood: The Pagan Revival and White Separatism*, Duke University Press, (2003)
8. Kathleen Blee. *Inside Organized Racism: Women in the Hate Movement*. Berkeley, California; London: University of California Press, (2002).

Chapter 8

ONLY PROGRESSIVES CAN SAVE AMERICA

8.1 Progressives from the 1960's can inspire us today

It is worthwhile today to remember the passion and dedication of the progressives of the 1960's. It was an era that saw the civil rights movement, protests against the Vietnam War, and the assassinations of Martin Luther King Jr., John F. Kennedy and Robert Kennedy. The brave resistance of American progressives of that time can inspire us today.

8.2 Woodstock

Wikipedia states that “Woodstock was a music festival held on a dairy farm in the Catskill Mountains, northwest of New York City, between August 15-18, 1969, which attracted an audience of more than 400,000.

“Billed as ‘An Aquarian Exposition: 3 Days of Peace & Music’, it was held at Max Yasgur’s 600-acre dairy farm near White Lake in Bethel, New York, 43 miles (70 km) southwest of Woodstock.

“Over the sometimes rainy weekend, 32 acts performed outdoors. It is widely regarded as a pivotal moment in popular music history, as well as the definitive nexus for the larger counterculture generation. Rolling Stone listed it as number 19 of the 50 Moments That Changed the History of Rock and Roll.

“The event was captured in the Academy Award-winning 1970 documentary movie *Woodstock*, an accompanying soundtrack album, and Joni Mitchell’s song ‘Woodstock’, which commemorated the event and became a major hit for both Crosby, Stills, Nash & Young and Matthews Southern Comfort. Joni Mitchell said, ‘Woodstock was a spark of beauty’ where half-a-million kids ‘saw that they were part of a greater organism’. In 2017, the festival site was listed on the National Register of Historic Places...

“There was worldwide media interest in the 40th anniversary of Woodstock in 2009. A number of activities to commemorate the festival took place around the world. On August



Figure 8.1: **The Woodstock Festival, 1969: “Give peace a chance!”**. An estimated 400,000 people attended the event.

15, at the Bethel Woods Center for the Arts overlooking the original site, the largest assembly of Woodstock performing alumni since the original 1969 festival performed in an eight-hour concert in front of a sold-out crowd...

“Another event occurred in Hawkhurst, Kent (UK), at a Summer of Love party, with acts including two of the participants at the original Woodstock, Barry Melton of Country Joe and the Fish and Robin Williamson of The Incredible String Band, plus Santana and Grateful Dead cover bands. On August 14 and 15, 2009, a 40th anniversary tribute concert was held in Woodstock, Illinois, and was the only festival to receive the official blessing of the ‘Father of Woodstock’, Artie Kornfeld. Kornfeld later made an appearance in Woodstock with the event’s promoters.

“Also in 2009, Michael Lang and Holly George-Warren published *The Road to Woodstock*, which describes Lang’s involvement in the creation of the Woodstock Music & Arts Festival, and includes personal stories and quotes from central figures involved in the event...

“Reports in late 2018 confirmed the plans for a 50th Anniversary event on the original site to be operated by the Bethel Woods Centre for the Arts. The scheduled date for the *Bethel Woods Music and Culture Festival: Celebrating the golden anniversary at the historic site of the 1969 Woodstock festival* was August 16-18 2019. Partners in the event are Live Nation and INVNT. Bethel Woods described the festival as a ‘pan-generational music, culture and community event’.”

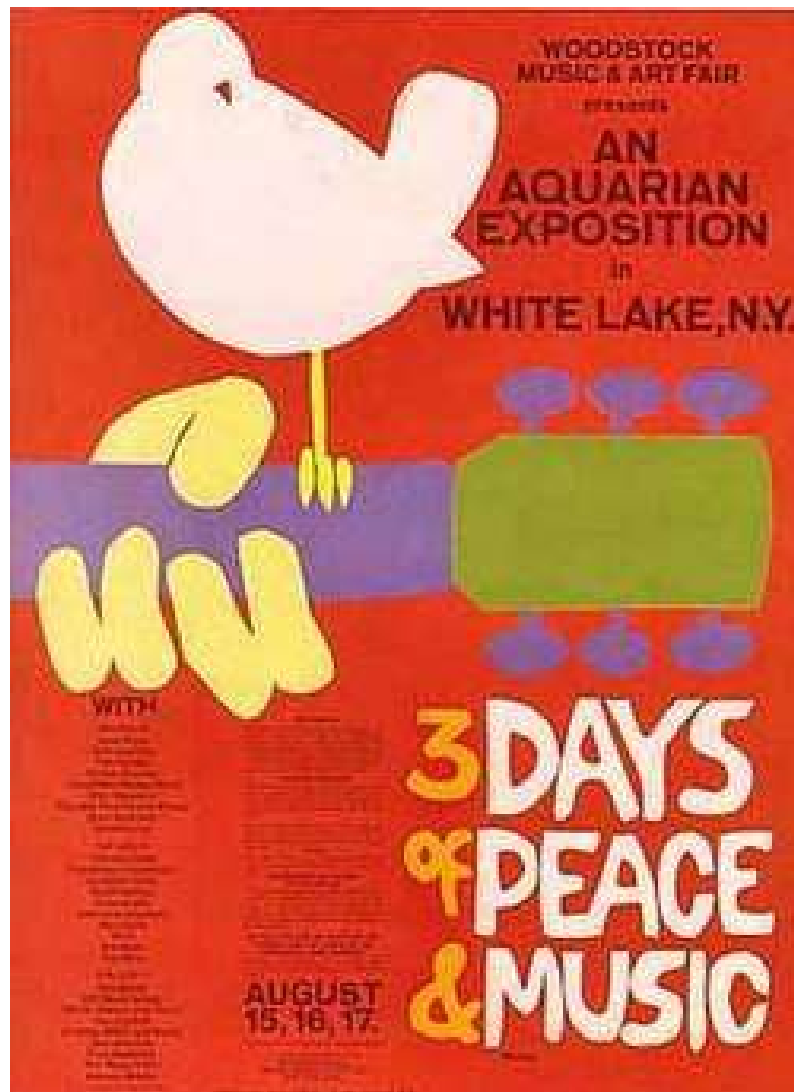


Figure 8.2: The Woodstock logo.



Figure 8.3: **Yes!.**



Figure 8.4: **The 50th anniversary event.**

8.3 Joan Baez

Joan Baez is an American folk-singer and activist who has been highly influential since her breakthrough 60 years ago. Her father was a Mexican-American physicist who is credited with inventing the X-ray microscope. While her father was working at MIT, Joan Baez gave her first concert in 1958 at Club 47 in Cambridge. In 1959, Bob Gibson invited Baez to perform at the Newport Folk Festival, where her astonishingly clear and expressive voice produced a sensation. Joan Baez promoted the career of Bob Dylan, at a time when she was a star while he was unknown, by inviting him to join her on the stage for duets. Wholeheartedly engaged in many anti-war, human rights and environmental causes, including opposition to the Viet Nam and Iraq wars, she regards her activism as more important than her singing. In 2011, Amnesty International introduced the yearly Joan Baez Award for outstanding service to human rights, giving the first award to Baez herself.

A few things that Joan Baez said

I would say that I'm a nonviolent soldier. In place of weapons of violence, you have to use your mind, your heart, your sense of humor, every faculty available to you...because no one has the right to take the life of another human being.

Action is the antidote to despair.

You don't get to choose how you're going to die, or when. You can only decide how you're going to live. Now.

I went to jail for 11 days for disturbing the peace; I was trying to disturb the war.

I think music has the power to transform people, and in doing so, it has the power to transform situations - some large and some small.

To sing is to love and affirm, to fly and to soar, to coast into the hearts of the people who listen to tell them that life is to live, that love is there, that nothing is a promise, but that beauty exists, and must be hunted for and found.

The easiest kind of relationship for me is with ten thousand people. The hardest is with one.

I have hope in people, in individuals. Because you don't know what's going to rise from the ruins.

As long as one keeps searching, the answers will come.

Only you and I can help the sun rise each coming morning. If we don't, it may drench itself out in sorrow.

All of us are survivors, but how many of us transcend survival?

If you don't have music, you have silence. There is power in both.

To sing is to praise God and the daffodils, and to praise God is to thank Him, in every note within my small range, and every color in the tones of my voice, with every look into the eyes of my audience, to thank Him. Thank you, God, for letting me be born, for giving me eyes to see the daffodils lean in the wind, all my brothers, all my sisters, for giving me ears to hear crying, legs to come running, hands to smooth damp hair, a voice to laugh with and to sing with...to sing to you and the daffodils.

The point on nonviolence is to build a floor, a strong new floor, beneath which we can no longer sink.

There's a consensus out that it's OK to kill when your government decides who to kill. If you kill inside the country you get in trouble. If you kill outside the country, right time, right season, latest enemy, you get a medal.

If you're going to sing meaningful songs, you have to be committed to living a life that backs that up.

Instead of getting hard ourselves and trying to compete, women should try and give their best qualities to men - bring them softness, teach them how to cry.

We're not really pacifists, we're nonviolent soldiers.

If it's natural to kill, how come men have to go into training to learn how?

If people have to put labels on me, I'd prefer the first label to be human being, the second label to be pacifist, and the third to be folk singer.

You may not know it, but at the far end of despair, there is a white clearing where one is almost happy.

I don't think of myself as a symbol of the sixties, but I do think of myself as a symbol of following through on your beliefs.



Figure 8.5: Joan Baez (born 1941) on the 1962 cover of Time Magazine.



What have they done to the rain?

Just a little rain falling all around
The grass lifts its head to the heavenly sound
Just a little rain, just a little rain
What have they done to the rain
Just a little boy standing in the rain
The gentle rain that falls for years
And the grass is gone, the boy disappears
And rain keeps falling like helpless tears
And what have they done to the rain
Just a little breeze out of the sky
The leaves nod their head as the breeze blows by
Just a little breeze with some smoke in its eye
What have they done to the rain

Just a little boy standing in the rain
The gentle rain that falls for years
And the grass is gone, the boy disappears
And rain keeps falling like helpless tears
And what have they done to the rain
What have they done to the rain

We shall overcome

We shall overcome,
We shall overcome,
We shall overcome, some day.

Oh, deep in my heart,
I do believe
We shall overcome, some day.

We'll walk hand in hand,
We'll walk hand in hand,
We'll walk hand in hand, some day.

Oh, deep in my heart,
I do believe
We'll walk hand in hand, some day.

We shall live in peace,

We shall live in peace,
We shall live in peace, some day.

Oh, deep in my heart,
I do believe
We shall live in peace, some day.

We shall all be free,
We shall all be free,
We shall all be free, some day.

Oh, deep in my heart,
I do believe
We shall all be free, some day.

We are not afraid,
We are not afraid,
We are not afraid, today.

Oh, deep in my heart,
I do believe
We are not afraid, today.

We shall overcome,
We shall overcome,
We shall overcome, some day.

Oh, deep in my heart,
I do believe
We shall overcome, some day.

8.4 Bob Dylan

An outstanding influence on music, poetry and the anti-war movement over six decades, Bob Dylan was awarded the Nobel Prize for Literature in 2016.

Bob Dylan was born in 1941 into a Jewish immigrant family named Zimmerman. He later changed his name to Dylan because of his admiration for the Welsh poet, Dylan Thomas. As a highschool student Bob Dylan initially formed a rock and roll band, but later realized that folk music was much more meaningful. Explaining this change, he said “The thing about rock’n’roll is that for me anyway it wasn’t enough... There were great catch-phrases and driving pulse rhythms... but the songs weren’t serious or didn’t reflect

life in a realistic way. I knew that when I got into folk music, it was more of a serious type of thing. The songs are filled with more despair, more sadness, more triumph, more faith in the supernatural, much deeper feelings.”

Bob Dylan greatly admired folk singer Woodie Guthrie. Describing Guthrie’s influence, he wrote: “The songs themselves had the infinite sweep of humanity in them... [He] was the true voice of the American spirit. I said to myself I was going to be Guthrie’s greatest disciple.”

Wikipedia states that “Many early songs reached the public through more palatable versions by other performers, such as Joan Baez, who became Dylan’s advocate as well as his lover. Baez was influential in bringing Dylan to prominence by recording several of his early songs and inviting him on stage during her concerts. ‘It didn’t take long before people got it, that he was pretty damned special,’ says Baez.”

Here are a few things that Bob Dylan said:

Behind every beautiful thing, there’s some kind of pain.

I accept chaos, I’m not sure whether it accepts me.

Don’t criticize what you can’t understand.

Sometimes it’s not enough to know what things mean, sometimes you have to know what things don’t mean.

I think women rule the world and that no man has ever done anything that a woman either hasn’t allowed him to do or encouraged him to do.

People seldom do what they believe in. They do what is convenient, then repent.

Gonna change my way of thinking, make myself a different set of rules. Gonna put my good foot forward and stop being influenced by fools.

When you’ve got nothing, you’ve got nothing to lose.

You can never be wise and be in love at the same time.

When you feel in your gut what you are and then dynamically pursue it - don’t back down and don’t give up - then you’re going to mystify a lot of folks.

It frightens me, the awful truth, of how sweet life can be...

Blowin' in the wind

How many roads must a man walk down
Before you call him a man?
How many seas must a white dove sail
Before she sleeps in the sand?
Yes, and how many times must the cannonballs fly
Before they're forever banned?

The answer, my friend, is blowin' in the wind
The answer is blowin' in the wind

Yes, and how many years can a mountain exist
Before it's washed to the sea?
Yes, and how many years can some people exist
Before they're allowed to be free?
Yes, and how many times can a man turn his head
And pretend that he just doesn't see?

The answer, my friend, is blowin' in the wind
The answer is blowin' in the wind

Yes, and how many times must a man look up
Before he can see the sky?
Yes, and how many ears must one man have
Before he can hear people cry?
Yes, and how many deaths will it take 'til he knows
That too many people have died?

The answer, my friend, is blowin' in the wind
The answer is blowin' in the wind



Figure 8.6: One of Bob Dylan's paintings



Figure 8.7: Another Dylan painting. His work has been exhibited by major museums.

8.5 Pete Seeger

Here are a few things that Pete Seeger said:

Do you know the difference between education and experience? Education is when you read the fine print; experience is what you get when you don't.

Any darn fool can make something complex; it takes a genius to make something simple.

If it can't be reduced, reused, repaired, rebuilt, refurbished, refinished, resold, recycled or composted, then it should be restricted, redesigned or removed from production.

Participation - that's what's gonna save the human race.

Well, normally I'm against big things. I think the world is going to be saved by millions of small things. Too many things can go wrong when they get big.

Once upon a time, wasn't singing a part of everyday life as much as talking, physical exercise, and religion? Our distant ancestors, wherever they were in this world, sang while pounding grain, paddling canoes, or walking long journeys. Can we begin to make our lives once more all of a piece? Finding the right songs and singing them over and over is a way to start. And when one person taps out a beat, while another leads into the melody, or when three people discover a harmony they never knew existed, or a crowd joins in on a chorus as though to raise the ceiling a few feet higher, then they also know there is hope for the world.

I've never sung anywhere without giving the people listening to me a chance to join in - as a kid, as a lefty, as a man touring the U.S.A. and the world, as an oldster. I guess it's kind of a religion with me. Participation. That's what's going to save the human race.

It's a very important thing to learn to talk to people you disagree with.

This banjo surrounds hate and forces it to surrender.

Singing with children in the schools has been the most rewarding experience of my life.

The key to the future of the world, is finding the optimistic stories and letting them be known.

The nice thing about poetry is that you're always stretching the definitions of words. Lawyers and scientists and scholars of one sort or another try to restrict the definitions, hoping that they can prevent people from fooling each other. But that doesn't stop people from lying.

Cezanne painted a red barn by painting it ten shades of color: purple to yellow. And he got a red barn. Similarly, a poet will describe things many different ways, circling around it, to get to the truth.

My father also had a nice little simile. He said, "The truth is a rabbit in a bramble patch. And you can't lay your hand on it. All you do is circle around and point, and say, 'It's in there somewhere'."

Keep your sense of humor. There is a 50-50 chance the world can be saved. You - yes you - might be the grain of sand that tips the scales the right way.

The world is like a seesaw out of balance: on one side is a box of big rocks, tilting it its way. On the other side is a box, and a bunch of us with teaspoons, adding a little sand at a time. One day, all of our teaspoons will add up, and the whole thing will tip, and people will say, 'How did it happen so fast?'

Our technology and our economic system seem to produce the present bad situation: millions of people feel themselves poor and powerless; millions feel that music is something to be made only by experts.

It all boils down to what I would most like to do as a musician. Put songs on people's lips instead of just in their ears.

Where have all the flowers gone?

Where have all the flowers men gone,
Long time passing,
Where have all the flowers men gone,
Long time ago,
Where have all the flowers men gone,
Young girls picked them every one,
When will they ever learn?
When will they ever learn?

Where have all the young girls gone,
Long time passing,
Where have all the young girls gone,
Long time ago,

Where have all the young girls gone,
Gone to husbands every one,
When will they ever learn?
When will they ever learn?

Where have all the young men gone,
Long time passing,
Where have all the young men gone,
Long time ago,
Where have all the young men gone,
Gone to soldiers every one,
When will they ever learn?
When will they ever learn?

Where have all the soldiers gone,
Long time passing,
Where have all the soldiers gone,
Long time ago,
Where have all the soldiers gone,
They've gone to graveyards every one,
When will they ever learn?
When will they ever learn?

Where have all the graveyards gone,
Long time passing,
Where have all the graveyards gone,
Long time ago,
Where have all the graveyards gone,
Gone to flowers every one,
When will we ever learn?
When will we ever learn?

What did you learn in school today?

What did you learn in school today,
Dear little boy of mine?
What did you learn in school today,
Dear little boy of mine?

I learned that Washington never told a lie.
I learned that soldiers seldom die.
I learned that everybody's free,

And that's what the teacher said to me.

I learned our Government must be strong;
It's always right and never wrong;
Our leaders are the finest men
And we elect them again and again.

I learned that war is not so bad;
I learned about the great ones we have had;
We fought in Germany and in France
And someday I might get my chance.

That's what I learned in school today,
That's what I learned in school.

Die gedanken sind frei

Die gedanken sind frei
My thoughts freely flower
Die gedanken sind frei
My thoughts give me power
No scholar can map them
No hunter can trap them
No man can deny
Die gedanken sind frei

I think as I please
And this gives me pleasure
My conscience decrees
This right I must treasure
My thoughts will not cater
To duke or dictator
No man can deny
Die gedanken sind frei

Tyrants can take me
And throw me in prison
My thoughts will burst forth
Like blossoms in season
Foundations may crumble
And structures may tumble
But free men shall cry



Figure 8.8: Pete Seeger entertaining Eleanor Roosevelt (center), honored guest at a racially integrated Valentine's Day party marking the opening of a Canteen of the United Federal Labor, CIO, in then-segregated Washington, D.C., 1944.

Die gedanken sind frei

We will love, or we will perish

We will love or we will perish

We will learn the rainbow to cherish

Dare to struggle, dare to danger

Dare to touch the hand of a stranger



Figure 8.9: Pete Seeger in 1979.



Figure 8.10: Pete Seeger at the Cklearwater Festival in June, 2007.



Figure 8.11: Seeger at 86 on the cover of Sing Out! (Summer 2005), a magazine he helped found in 1950.

8.6 Protests against the Vietnam War

An excerpt from Martin Luther King, Jr.'s Riverside Church speech

This I believe to be the privilege and the burden of all of us who deem ourselves bound by allegiances and loyalties which are broader and deeper than nationalism and which go beyond our nation's self-defined goals and positions. We are called to speak for the weak, for the voiceless, for the victims of our nation and for those it calls "enemy," for no document from human hands can make these humans any less our brothers.

And as I ponder the madness of Vietnam and search within myself for ways to understand and respond in compassion, my mind goes constantly to the people of that peninsula. I speak now not of the soldiers of each side, not of the ideologies of the Liberation Front, not of the junta in Saigon, but simply of the people who have been living under the curse of war for almost three continuous decades now. I think of them, too, because it is clear to me that there will be no meaningful solution there until some attempt is made to know them and hear their broken cries.

They must see Americans as strange liberators. The Vietnamese people proclaimed their own independence in 1954 – in 1945 rather – after a combined French and Japanese occupation and before the communist revolution in China. They were led by Ho Chi Minh. Even though they quoted the American Declaration of Independence in their own document of freedom, we refused to recognize them. Instead, we decided to support France in its reconquest of her former colony. Our government felt then that the Vietnamese people were not ready for independence, and we again fell victim to the deadly Western arrogance that has poisoned the international atmosphere for so long. With that tragic decision we rejected a revolutionary government seeking self-determination and a government that had been established not by China – for whom the Vietnamese have no great love – but by clearly indigenous forces that included some communists. For the peasants this new government meant real land reform, one of the most important needs in their lives.

For nine years following 1945 we denied the people of Vietnam the right of independence. For nine years we vigorously supported the French in their abortive effort to recolonize Vietnam. Before the end of the war we were meeting eighty percent of the French war costs. Even before the French were defeated at Dien Bien Phu, they began to despair of their reckless action, but we did not. We encouraged them with our huge financial and military supplies to continue the war even after they had lost the will. Soon we would be paying almost the full costs of this tragic attempt at recolonization.

After the French were defeated, it looked as if independence and land reform would come again through the Geneva Agreement. But instead there

came the United States, determined that Ho should not unify the temporarily divided nation, and the peasants watched again as we supported one of the most vicious modern dictators, our chosen man, Premier Diem. The peasants watched and cringed as Diem ruthlessly rooted out all opposition, supported their extortionist landlords, and refused even to discuss reunification with the North. The peasants watched as all this was presided over by United States' influence and then by increasing numbers of United States troops who came to help quell the insurgency that Diem's methods had aroused. When Diem was overthrown they may have been happy, but the long line of military dictators seemed to offer no real change, especially in terms of their need for land and peace.

The only change came from America, as we increased our troop commitments in support of governments which were singularly corrupt, inept, and without popular support. All the while the people read our leaflets and received the regular promises of peace and democracy and land reform. Now they languish under our bombs and consider us, not their fellow Vietnamese, the real enemy. They move sadly and apathetically as we herd them off the land of their fathers into concentration camps where minimal social needs are rarely met. They know they must move on or be destroyed by our bombs.

So they go, primarily women and children and the aged. They watch as we poison their water, as we kill a million acres of their crops. They must weep as the bulldozers roar through their areas preparing to destroy the precious trees. They wander into the hospitals with at least twenty casualties from American firepower for one Vietcong-inflicted injury. So far we may have killed a million of them, mostly children. They wander into the towns and see thousands of the children, homeless, without clothes, running in packs on the streets like animals. They see the children degraded by our soldiers as they beg for food. They see the children selling their sisters to our soldiers, soliciting for their mothers.

What do the peasants think as we ally ourselves with the landlords and as we refuse to put any action into our many words concerning land reform? What do they think as we test out our latest weapons on them, just as the Germans tested out new medicine and new tortures in the concentration camps of Europe? Where are the roots of the independent Vietnam we claim to be building? Is it among these voiceless ones?

We have destroyed their two most cherished institutions: the family and the village. We have destroyed their land and their crops. We have cooperated in the crushing – in the crushing of the nation's only non-Communist revolutionary political force, the unified Buddhist Church. We have supported the enemies of the peasants of Saigon. We have corrupted their women and children and killed their men.

Now there is little left to build on, save bitterness. Soon, the only solid – solid physical foundations remaining will be found at our military bases and

in the concrete of the concentration camps we call "fortified hamlets." The peasants may well wonder if we plan to build our new Vietnam on such grounds as these. Could we blame them for such thoughts? We must speak for them and raise the questions they cannot raise. These, too, are our brothers.

Perhaps a more difficult but no less necessary task is to speak for those who have been designated as our enemies. What of the National Liberation Front, that strangely anonymous group we call "VC" or "communists"? What must they think of the United States of America when they realize that we permitted the repression and cruelty of Diem, which helped to bring them into being as a resistance group in the South? What do they think of our condoning the violence which led to their own taking up of arms? How can they believe in our integrity when now we speak of "aggression from the North" as if there were nothing more essential to the war? How can they trust us when now we charge them with violence after the murderous reign of Diem and charge them with violence while we pour every new weapon of death into their land? Surely we must understand their feelings, even if we do not condone their actions. Surely we must see that the men we supported pressed them to their violence. Surely we must see that our own computerized plans of destruction simply dwarf their greatest acts.

How do they judge us when our officials know that their membership is less than twenty-five percent communist, and yet insist on giving them the blanket name? What must they be thinking when they know that we are aware of their control of major sections of Vietnam, and yet we appear ready to allow national elections in which this highly organized political parallel government will not have a part? They ask how we can speak of free elections when the Saigon press is censored and controlled by the military junta. And they are surely right to wonder what kind of new government we plan to help form without them, the only party in real touch with the peasants. They question our political goals and they deny the reality of a peace settlement from which they will be excluded. Their questions are frighteningly relevant. Is our nation planning to build on political myth again, and then shore it up upon the power of new violence?

Here is the true meaning and value of compassion and nonviolence, when it helps us to see the enemy's point of view, to hear his questions, to know his assessment of ourselves. For from his view we may indeed see the basic weaknesses of our own condition, and if we are mature, we may learn and grow and profit from the wisdom of the brothers who are called the opposition.

So, too, with Hanoi. In the North, where our bombs now pummel the land, and our mines endanger the waterways, we are met by a deep but understandable mistrust. To speak for them is to explain this lack of confidence in Western words, and especially their distrust of American intentions now. In Hanoi are the men who led the nation to independence against the Japanese and the French, the men who sought membership in the French Commonwealth

and were betrayed by the weakness of Paris and the willfulness of the colonial armies. It was they who led a second struggle against French domination at tremendous costs, and then were persuaded to give up the land they controlled between the thirteenth and seventeenth parallel as a temporary measure at Geneva. After 1954 they watched us conspire with Diem to prevent elections which could have surely brought Ho Chi Minh to power over a united Vietnam, and they realized they had been betrayed again. When we ask why they do not leap to negotiate, these things must be remembered.

Also, it must be clear that the leaders of Hanoi considered the presence of American troops in support of the Diem regime to have been the initial military breach of the Geneva Agreement concerning foreign troops. They remind us that they did not begin to send troops in large numbers and even supplies into the South until American forces had moved into the tens of thousands.

Hanoi remembers how our leaders refused to tell us the truth about the earlier North Vietnamese overtures for peace, how the president claimed that none existed when they had clearly been made. Ho Chi Minh has watched as America has spoken of peace and built up its forces, and now he has surely heard the increasing international rumors of American plans for an invasion of the North. He knows the bombing and shelling and mining we are doing are part of traditional pre-invasion strategy. Perhaps only his sense of humor and of irony can save him when he hears the most powerful nation of the world speaking of aggression as it drops thousands of bombs on a poor, weak nation more than eight hundred – rather, eight thousand miles away from its shores.

At this point I should make it clear that while I have tried in these last few minutes to give a voice to the voiceless in Vietnam and to understand the arguments of those who are called "enemy," I am as deeply concerned about our own troops there as anything else. For it occurs to me that what we are submitting them to in Vietnam is not simply the brutalizing process that goes on in any war where armies face each other and seek to destroy. We are adding cynicism to the process of death, for they must know after a short period there that none of the things we claim to be fighting for are really involved. Before long they must know that their government has sent them into a struggle among Vietnamese, and the more sophisticated surely realize that we are on the side of the wealthy, and the secure, while we create a hell for the poor.

Somehow this madness must cease. We must stop now. I speak as a child of God and brother to the suffering poor of Vietnam. I speak for those whose land is being laid waste, whose homes are being destroyed, whose culture is being subverted. I speak of the – for the poor of America who are paying the double price of smashed hopes at home, and death and corruption in Vietnam. I speak as a citizen of the world, for the world as it stands aghast at the path we have taken. I speak as one who loves America, to the leaders of our own nation: The great initiative in this war is ours; the initiative to stop it must be ours.

This is the message of the great Buddhist leaders of Vietnam. Recently one of them wrote these words, and I quote: "Each day the war goes on the hatred increases in the heart of the Vietnamese and in the hearts of those of humanitarian instinct. The Americans are forcing even their friends into becoming their enemies. It is curious that the Americans, who calculate so carefully on the possibilities of military victory, do not realize that in the process they are incurring deep psychological and political defeat. The image of America will never again be the image of revolution, freedom, and democracy, but the image of violence and militarism".

If we continue, there will be no doubt in my mind and in the mind of the world that we have no honorable intentions in Vietnam. If we do not stop our war against the people of Vietnam immediately, the world will be left with no other alternative than to see this as some horrible, clumsy, and deadly game we have decided to play. The world now demands a maturity of America that we may not be able to achieve. It demands that we admit that we have been wrong from the beginning of our adventure in Vietnam, that we have been detrimental to the life of the Vietnamese people. The situation is one in which we must be ready to turn sharply from our present ways. In order to atone for our sins and errors in Vietnam, we should take the initiative in bringing a halt to this tragic war.

I would like to suggest five concrete things that our government should do [immediately] to begin the long and difficult process of extricating ourselves from this nightmarish conflict:

Number one: End all bombing in North and South Vietnam.

Number two: Declare a unilateral cease-fire in the hope that such action will create the atmosphere for negotiation.

Three: Take immediate steps to prevent other battlegrounds in Southeast Asia by curtailing our military buildup in Thailand and our interference in Laos.

Four: Realistically accept the fact that the National Liberation Front has substantial support in South Vietnam and must thereby play a role in any meaningful negotiations and any future Vietnam government.

Five: Set a date that we will remove all foreign troops from Vietnam in accordance with the 1954 Geneva Agreement...

In 1957, a sensitive American official overseas said that it seemed to him that our nation was on the wrong side of a world revolution. During the past ten years, we have seen emerge a pattern of suppression which has now justified the presence of U.S. military advisors in Venezuela. This need to maintain social stability for our investments accounts for the counterrevolutionary action of American forces in Guatemala. It tells why American helicopters are being used against guerrillas in Cambodia and why American napalm and Green Beret forces have already been active against rebels in Peru.

It is with such activity in mind that the words of the late John F. Kennedy

come back to haunt us. Five years ago he said, "Those who make peaceful revolution impossible will make violent revolution inevitable." Increasingly, by choice or by accident, this is the role our nation has taken, the role of those who make peaceful revolution impossible by refusing to give up the privileges and the pleasures that come from the immense profits of overseas investments. I am convinced that if we are to get on the right side of the world revolution, we as a nation must undergo a radical revolution of values. We must rapidly begin...we must rapidly begin the shift from a thing-oriented society to a person-oriented society. When machines and computers, profit motives and property rights, are considered more important than people, the giant triplets of racism, extreme materialism, and militarism are incapable of being conquered.

A true revolution of values will soon cause us to question the fairness and justice of many of our past and present policies. On the one hand, we are called to play the Good Samaritan on life's roadside, but that will be only an initial act. One day we must come to see that the whole Jericho Road must be transformed so that men and women will not be constantly beaten and robbed as they make their journey on life's highway. True compassion is more than flinging a coin to a beggar. It comes to see that an edifice which produces beggars needs restructuring.

A true revolution of values will soon look uneasily on the glaring contrast of poverty and wealth. With righteous indignation, it will look across the seas and see individual capitalists of the West investing huge sums of money in Asia, Africa, and South America, only to take the profits out with no concern for the social betterment of the countries, and say, "This is not just." It will look at our alliance with the landed gentry of South America and say, "This is not just." The Western arrogance of feeling that it has everything to teach others and nothing to learn from them is not just.

A true revolution of values will lay hand on the world order and say of war, "This way of settling differences is not just." This business of burning human beings with napalm, of filling our nation's homes with orphans and widows, of injecting poisonous drugs of hate into the veins of peoples normally humane, of sending men home from dark and bloody battlefields physically handicapped and psychologically deranged, cannot be reconciled with wisdom, justice, and love. A nation that continues year after year to spend more money on military defense than on programs of social uplift is approaching spiritual death.



Figure 8.12: Protests against the Vietnam War in Washington, D.C., on October 21, 1967.



Figure 8.13: U.S. Marshals dragging away a Vietnam War protester in Washington, D.C., 1967.



Figure 8.14: John Filo's Pulitzer Prize-winning photograph of Mary Ann Vecchio kneeling over the body of Jeffrey Miller minutes after he was fatally shot by the Ohio National Guard.



Figure 8.15: Berkeley anti-war protests.



Figure 8.16: Photo taken by United States Army photographer Ronald L. Haeberle on March 16, 1968, in the aftermath of the My Lai Massacre showing mostly women and children dead on a road.



Figure 8.17: Frightened children fleeing from bombs in Vietnam.

8.7 Progressive Democrats versus the DNC and Nancy Pelosi

One aspect in the bitter split in public opinion in the United States is the split in the Democratic Party between progressives, such as Bernie Sanders, Elizabeth Warren or Alexandria Ocasio-Cortez, and what might be called Corporate Democrats, such as Nancy Pelosi, Hillary Clinton and Joe Biden, as well as the Democratic National Committee.

In the 2016 presidential election, the immensely popular Senator Bernie Sanders would have easily defeated Donald Trump. However, the DNC actively sabotaged his campaign, and the slavish corporate-controlled mass media did the same. The result was that the Democratic Party ran Hillary Clinton as their presidential candidate, to the outrage and disgust of young progressive voters. Hillary Clinton was seen by the progressives as having blood on her hands from her participation as Secretary of State in immoral and illegal US wars. She was also seen as having close ties with both Wall Street and the Israel Lobby. The result was that the progressives stayed away from the polls in disillusion and disgust, and Donald Trump won narrowly, losing the popular vote, but winning the electoral vote.

The Democratic Party bosses seem about to repeat this mistake in 2020, sabotaging Bernie Sanders and Elizabeth Warren, and pushing for the nomination of Joe Biden, a candidate closely analogous to Hillary Clinton. Biden, too, has blood on his hands. Although he now denies it, records show that he supported the Iraq War. Thus, dishonesty must be added to his other faults. Biden, too, has close connections with both Wall Street and the Israel Lobby. Corporations love him. Progressives hate him. Biden would be better than Trump, if elected, but that is faint praise indeed, since almost anyone would be better than Trump. The Democrats risk repeating the 2016 election disaster, if Biden is their candidate. Only progressives can win.

Here is a quotation from a recent article by Chris Hedges¹:

The oligarchs, who spent \$1 billion in 2016 to deny Sanders the Democratic Party nomination and try to put Hillary Clinton in the White House, learned nothing from the debacle. If they can't shove Joe Biden down our throats, how about Pete Buttigieg or Michael Bloomberg? And should Warren or Sanders miraculously become the Democratic candidate, which the oligarchs are working hard to prevent, they will reluctantly back Trump. Trump may be vulgar, corrupt and inept, he may have turned the United States into an international pariah, but he slavishly serves the financial interests of the oligarchs.

And here is a quotation from a recent article by Eion Higgins and John Queally²

Rep. Alexandria Ocasio-Cortez will endorse Sen. Bernie Sanders for president, The Washington Post reported Tuesday night, a political coup for the Vermont senator as he looks to increase his standing in the polls for the 2020

¹<http://www.informationclearinghouse.info/52525.htm>

²<https://truthout.org/articles/ocasio-cortez-to-endorse-bernie-sanders-for-president/>

Democratic presidential nomination...

Her backing was a sought-after prize in the Democratic primary, and it was widely assumed that she would endorse either Sanders or Warren, the most liberal figures in the contest...

Reps. Ilhan Omar (D-Minn.) and Rashida Tlaib (D-Mich.) will also endorse Sanders, reported CNN's Greg Krieg.

"Bernie is leading a working class movement to defeat Donald Trump that transcends generation, ethnicity and geography," Omar said in a statement, adding, "it's why I believe Bernie Sanders is the best candidate to take on Donald Trump in 2020."

"Ilhan is a leader of strength and courage," said Sanders. "She will not back down from a fight with billionaires and the world's most powerful corporations to transform our country so it works for all of us. I'm proud of what we've done in Congress, and together we will build a multiracial working class coalition to win the White House."

8.8 Elizabeth Warren

Some things that Elizabeth Warren has said

[On climate change] I don't accept the Republicans' argument that boldly addressing climate change and having the world's strongest economy are incompatible. I believe that the exact opposite of that is true. Tackling our climate challenges will provide us with the opportunity to grow our economy, protect public health, and propel the United States to become the world leader in green innovation in the 21st century. We can address climate change and strengthen our economy by making major upgrades to our crumbling infrastructure, building more resiliency along our coasts and rivers, constructing more renewable energy, and promoting policies that will spur new, innovative research. These investments will protect our planet and create good jobs, with living wages, strong benefits, and safe working conditions.

[On cutting the Pentagon budget] Let's cut our bloated defense budget. The United States will spend more than \$700 billion on defense this year alone. That is more than President Ronald Reagan spent during the Cold War. It's more than the federal government spends on education, medical research, border security, housing, the FBI, disaster relief, the State Department, foreign aid—everything else in the discretionary budget put together. This is unsustainable. If more money for the Pentagon could solve our security challenges, we would have solved them by now.

Big corporations have money and power to make sure every rule breaks their way; people have voices and votes to push back.

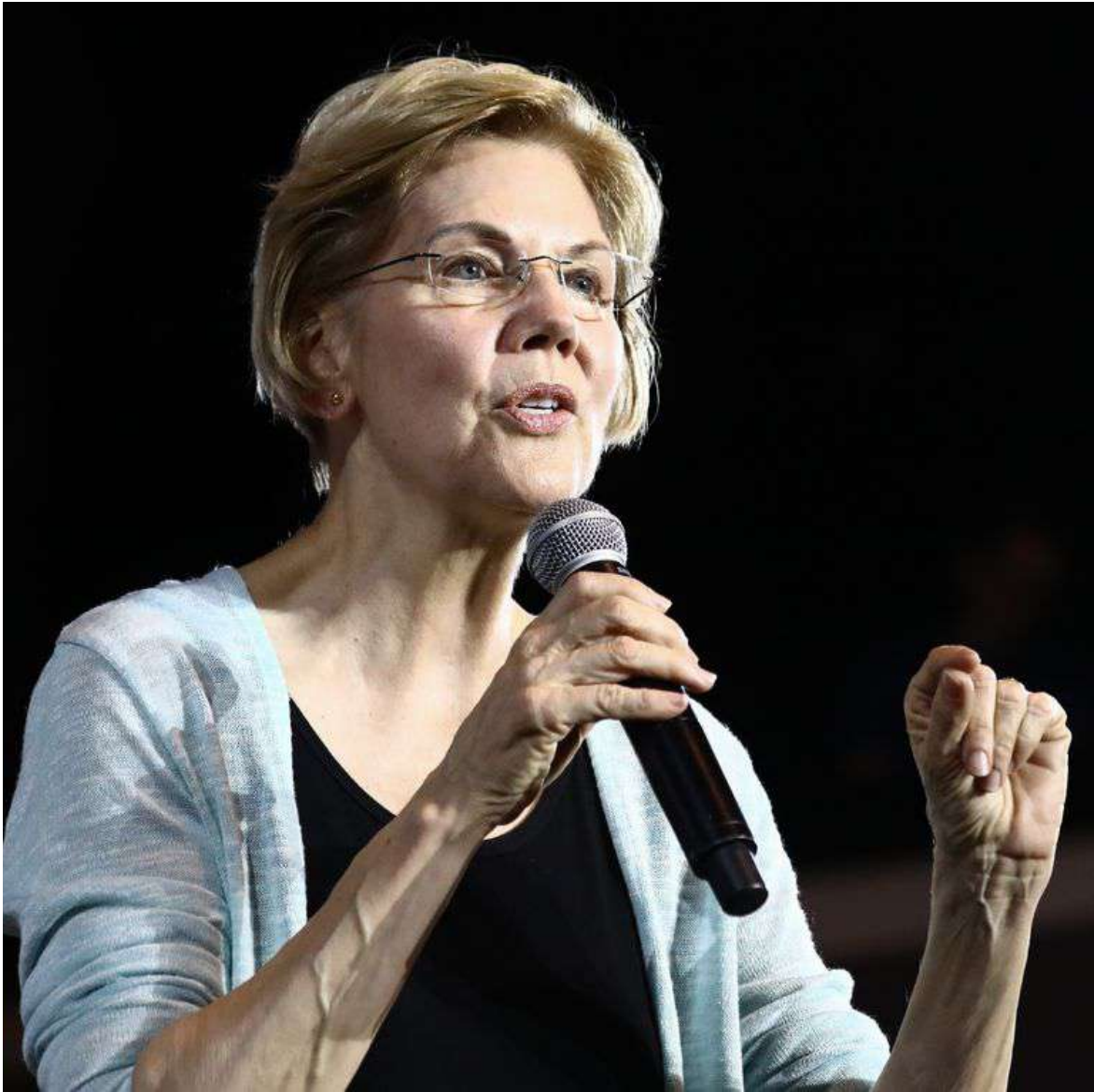


Figure 8.18: **Senator Elizabeth Warren**

There is nobody in this country who got rich on his own. Nobody. ... You moved your goods to market on the roads the rest of us paid for; you hired workers the rest of us paid to educate; you were safe in your factory because of police forces and fire forces that the rest of us paid for. You didn't have to worry that marauding bands would come and seize everything at your factory, and hire someone to protect against this, because of the work the rest of us did. Now look, you built a factory and it turned into something terrific, or a great idea. God bless. Keep a big hunk of it. But part of the underlying social contract is, you take a hunk of that and pay forward for the next kid who comes along.

Rising student-loan debt is an economic emergency... We got into this crisis because state governments and the federal government decided that instead of treating higher education like our public school system - free and accessible to all Americans - they'd rather cut taxes for billionaires and giant corporations and offload the cost of higher education onto students and their families. The student debt crisis is the direct result of this failed experiment. [...] That's why I'm calling for something truly transformational - the cancellation of up to \$50,000 in student loan debt for 42 million Americans

[On Donald Trump] Donald Trump identifies a real problem in America, and that is a lot of folks are hurting. And then he takes a turn and says, "it's the fault of those people, people who don't look like you, people who don't sound like you, people who don't worship like you, people who are not the same color, who didn't speak the same language." What he wants to do is set working people against working people, black working people against white working people.

You can't predict it all. People will tell you to plan things out as best you can. They will tell you to focus. They will tell you to follow your dreams. They will all be right.

America had been a boom-and-bust economy going into the Great Depression - just over and over and over, fortunes were wiped out, ordinary families were crushed under it.

How do you think we build a future? I think we build it by investing in our kids and investing in education.

Americans are fighters. We're tough, resourceful and creative, and if we have the chance to fight on a level playing field, where everyone pays a fair share and everyone has a real shot, then no one - no one can stop us.

The word's out: I'm a woman, and I'm going to have trouble backing off on that. I am what I am. I'll go out and talk to people about what's happening to their families, and when I do that, I'm a mother. I'm a grandmother.

In the 1960s, a minimum wage job would keep a family of three afloat.

What I've learned is that real change is very, very hard. But I've also learned that change is possible - if you fight for it.

A good education is a foundation for a better future.

8.9 Bernie Sanders

Some quotations from Bernie Sanders' *Our Revolution*

As President Franklin Delano Roosevelt reminded us: "The test of our progress is not whether we add more to the abundance of those who have much, it is whether we provide enough for those who have little".

This campaign was never just about electing a president of the United States - as enormously important as that was. This campaign was about transforming America. It was about the understanding that real change never takes place from the top on down. It always takes place from the bottom on up. It takes place when ordinary people, by the millions, are prepared to stand up and fight for justice.

Republicans have cultivated, into a fine art, the ability to divide people up by race, gender, nationality, or sexual orientation. That's what they do. That is the essence of their politics. They get one group to fight another group while their wealthy friends and campaign contributors get richer and laugh all the way to the bank.

You can't have it all. You can't get huge tax breaks while children in this country go hungry. You can't continue sending our jobs to China while millions are looking for work. You can't hide your profits in the Cayman Islands and other tax havens while there are massive unmet needs on every corner of this nation. Your greed has got to end. You cannot take advantage of all the benefits of America if you refuse to accept your responsibilities.

Democracy is about one person, one vote. It's about all of us coming together to determine the future of our country. It is not about a handful of billionaires buying elections, or governors suppressing the vote by denying poor people or



Figure 8.19: **Senator Bernie Sanders in 2019.**

people of color the right to vote. Our job is to stand together to defeat the drift toward oligarchy and create a vibrant democracy.

Bill McKibben named his climate change advocacy group 350.org, because 350 ppm of atmospheric carbon dioxide is what Dr. James Hansen, former head of the Goddard Institute for Space Studies and one of the most respected climatologists in the world, says is the maximum level to “preserve a planet similar to that on which civilization developed and to which life on Earth is adapted.” Tragically, we have now exceeded 400 ppm.

If we are going to create a financial system that works for all Americans, we have got to stop financial institutions from ripping off the American people by charging sky-high interest rates and outrageous fees. In my view, it is unacceptable that Americans are paying a \$4 or \$5 fee each time they go to the ATM. It is unacceptable that millions of Americans are paying credit card interest rates of 20 or 30 percent. The Bible has a term for this practice. It’s called usury. And in *The Divine Comedy*, Dante reserved a special place in the Seventh Circle of Hell for those who charged people usurious interest rates. Today, we don’t need the hellfire and the pitch forks, we don’t need the rivers of boiling blood, but we do need a national usury law.

WHO OWNS THE MEDIA? Most Americans have very little understanding of the degree to which media ownership in America - what we see, hear, and read - is concentrated in the hands of a few giant corporations. In fact, I suspect that when people look at the hundreds of channels they receive on their cable system, or the many hundreds of magazines they can choose from in a good bookstore, they assume that there is a wide diversity of ownership. Unfortunately, that’s not the case. In 1983 the largest fifty corporations controlled 90 percent of the media. That’s a high level of concentration. Today, as a result of massive mergers and takeovers, six corporations control 90 percent of what we see, hear, and read. This is outrageous, and a real threat to our democracy. Those six corporations are Comcast, News Corp, Disney, Viacom, Time Warner, and CBS. In 2010, the total revenue of these six corporations was \$275 billion. In a recent article in *Forbes* magazine discussing media ownership, the headline appropriately read: “These 15 Billionaires Own America’s News Media Companies.” Exploding technology is transforming the media world, and mergers and takeovers are changing the nature of ownership. *FreePress.net* is one of the best media watchdog organizations in the country, and has been opposed to the kind of media consolidation that we have seen in recent years. It has put together a very powerful description of what media concentration means.

We, proudly, were the only campaign not to have a super PAC. In a manner

unprecedented in American history, we received some 8 million individual campaign contributions. The average contribution was \$27. These donations came from 2.5 million Americans, the vast majority of whom were low- or moderate-income people.

There is no justice, and I want you to hear this clearly, when the top one-tenth of 1 percent - not 1 percent, the top one-tenth of 1 percent - today in America owns almost as much wealth as the bottom 90 percent.

They are rightfully tired of turning on the television and seeing videos of unarmed blacks being shot and killed by police officers. They want criminal justice reform. They want police department reform.

Bernie also said:

I am who I am, and what I believe in and what my spirituality is about is that we're all in this together. That I think it is not a good thing to believe as human beings we can turn our backs on the suffering of other people ... and this is not Judaism, this is what Pope Francis is talking about, that we can't just worship billionaires and the making of more and more money. Life is more than that.

The history of American democracy, to say the least, has been checkered. Our nation was founded at a time when people of African descent were held in bondage. After slavery was abolished, they were forced to endure legal discrimination for another 100 years.

Let us wage a moral and political war against the billionaires and corporate leaders, on Wall Street and elsewhere, whose policies and greed are destroying the middle class of America.

Unemployment insurance, abolishing child labor, the 40-hour work week, collective bargaining, strong banking regulations, deposit insurance, and job programs that put millions of people to work were all described, in one way or another, as 'socialist.' Yet, these programs have become the fabric of our nation and the foundation of the middle class.

Yes, we become stronger when men and women, young and old, gay and straight, native-born and immigrant fight together to create the kind of country we all know we can become.

Democratic socialism means that we must create an economy that works for all, not just the very wealthy.

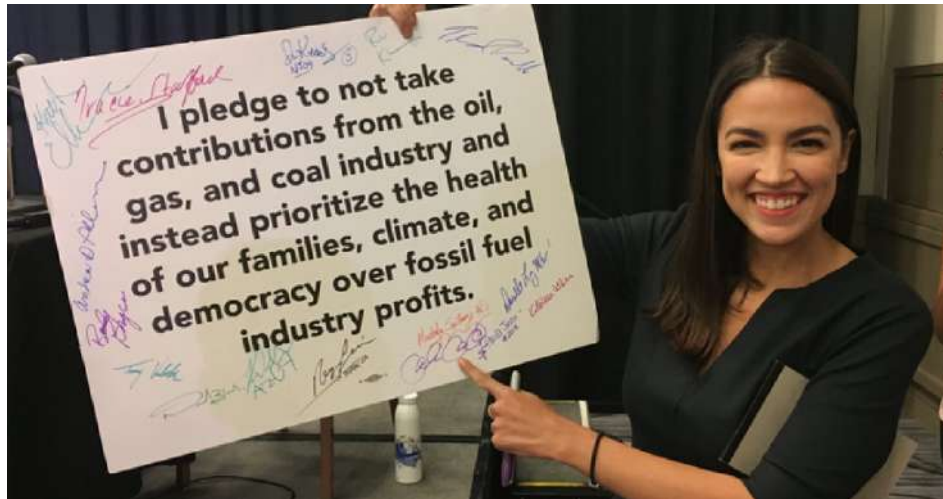


Figure 8.20: 28-year-old Alexandria Ocasio-Cortez (born in 1989) won a stunning victory in the Democratic Party primary election of June 26, 2018. Although outspent by a factor of 18 to 1 by her opponent (Democratic Caucus Chair, Joseph Crowley), she won the primary by 57% to 42%. Her campaign contributions came from small individual donors, while his came in large blocks, from corporations. Ocasio-Cortez calls for the United States to transition by 2035 to an electrical grid running on 100% renewable-energy production and end the use of fossil fuels. She calls healthcare “a human right”, and says: “Almost every other developed nation in the world has universal healthcare. It’s time the United States catch up to the rest of the world in ensuring all people have real healthcare coverage that doesn’t break the bank”. The Guardian called her victory “one of the biggest upsets in recent American political history”, and Senator Bernie Sanders commented “She took on the entire local Democratic establishment in her district and won a very strong victory. She demonstrated once again what progressive grassroots politics can do”. The lesson that the US Democratic Party must learn from this is that in order to overthrow Donald Trump’s openly racist Republican Party in the 2020 elections, they must free themselves from the domination of corporate oligarchs, and instead stand for honest government and progressive values. House Speaker Nancy Pelosi is facing criticism from climate activists for failing to back a Green New Deal. Last week Pelosi announced the formation of a new Select Committee on the Climate Crisis, headed by long-standing Florida Congressman Kathy Castor. But the committee is far weaker than what backers of a Green New Deal had envisioned. The committee will not have subpoena power or the power to draft legislation. According to a January 24 2019 article by Robert R. Raymond, “When polled, 92 percent of registered Democratic voters say they support the Green New Deal. But perhaps more importantly, a full 81 percent of all registered voters support it - a number that includes both Republicans and Democrats.”

8.10 Looking toward the future

This book has concentrated on the present situation in the United States, where the Constitution, the Bill of Rights, and all other democratic institutions are threatened by racism and neo-fascism, and where progressives are fighting to save the enlightened values on which their country was founded - fighting to save America's soul.

The United States is part of a larger global crisis, where the futures of human society and the biosphere are threatened by the dangers of catastrophic climate change, or an all-destroying thermonuclear war. There is also a danger that, by the middle of the present century, the growth of global population, the end of the fossil fuel era, and the impact of climate change on agriculture, will lead to a famine involving billions of people.

In order to avoid catastrophic climate change, fossil fuels must be left in the ground. At present, there is no sign that this is happening. Our economies are based on fossil fuels. The forces of institutional and cultural inertia are very strong. We continue to think and behave just as we always have done. But the community of climate scientists is unanimous in telling us that if we do not stop the extraction and use of fossil fuels within a decade, tipping points will be reached beyond which feedback loops (such as the albedo effect, the methane hydrate feedback loop, and tropical forest drying and burning) will take over, after which human efforts to avoid climate disaster will become useless.

Everything must change. The policies of governments must change, as well as the daily lives of individuals. We must abandon consumerism. We must abandon the mantra of economic growth.

But if we stop flying except when absolutely necessary; if we stop buying the latest fashions and wear our clothes until they wear out; if we stop using private automobiles and shift to bicycles and public transport; if we stop producing enormous amounts of armaments, will this not produce an economic recession? There is indeed a danger that this will happen. There is, in any case, a danger of a recession, because of excessive debt, both private and governmental.

In the long run, not only the United States, but also the entire world, must shift to a steady-state economic system. Endless growth of any kind on a finite planet is a logical impossibility.

The Green New Deal, which is currently being proposed, not only in the United States, but also in many other countries, offers the possibility of avoiding a recession and maintaining full employment by using the same techniques that Franklin Delano Roosevelt used to end the Great Depression. Work on building urgently needed renewable energy infrastructure can replace work in coal mines or oil rigs. Jobs should also be shifted to the service sector, and to culture and education. We must aim at a truly sustainable global society. We must join hands across the globe, and build a future for our children and grandchildren, and for all the animals and plants with which we share the gift of life.

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Index

- Abraham Lincoln, 37
- Absolute temperature, 190
- Academy Award-winning documentary, 261
- Accident waiting to happen, 56
- Accidental nuclear war, 56, 66
- Accidents, 62
- Act of Valor, 75
- Admiral von Turpitz, 42
- Adolf Hitler, 44
- Advertisers on mass media, 226
- Aesthetic aspects, 185
- Africa, 68, 177, 197
- Agony of Iraq, 108
- Agricultural yields, 208
- Agriculture, 58, 60
- Air conditioners, 182
- Airbus, 71
- Al Gore, 227
- Al-Qaeda, 65, 67
- Alaska, 197, 250
- Aleutian Islands, 197
- Algae, 194
- Alliance for Climate Protection, 227
- Already-defeated Japan, 135, 145
- Alt-right, 235
- Alt-right fight club, 242
- Alt-right supported Donald Trump, 236
- Alternative for Germany party, 249
- Alternative media, 226
- Alternative Right webzine, 235
- Aluminum foil, 183
- Aluminum, production of, 188
- Aluminum-covered plastics, 178
- Amazon destruction planned, 157
- America's top-heavy wealth distribution, 98
- American Sniper, 75
- Americium, 66
- Ammonia, 182
- Amnesty International, 266
- An Inconvenient Truth, 227
- Anaerobic digestion, 194
- Andrew Anglin's Daily Stormer, 235
- Angela Merkel's telephone, 101, 139
- Animal products, 205
- Annan, Kofi, 59, 66
- Annapolis River, 189
- Anode, 199
- Anthropocene, 75
- Anthropogenic climate change, 66
- Anti-Christian and anti-democratic, 244
- Anti-science disinformation campaigns, 169
- Anti-war activist, 266
- Anticommunist alternative, 46
- Antifreeze, 182
- Antihuman weapons, 135
- Aquifers overdrawn, 207, 209, 213
- Architecture, 182
- Arctic oil, 162
- Area of cropland, 208, 209
- Area of irrigated land, 215
- Arid grasslands, 209
- Aridity, 207, 212
- Armaments race, 41, 43
- Arms control agreements, 75
- Arms manufacturers, 43
- Arms race, 41
- Army training program, 75
- Article VI, 56
- Articles of Confederation, 25
- Asia, 62

- Assange, Julian, 135
- Assassination attempts, 65
- Assassination of King, 37
- Assassinations, 133, 135
- Asteroids, 56
- Astonishing degree of cynicism, 170
- Atlas Network, 170
- Atrocities committed by conquistadors, 15
- Attacks on Iran, actual and threatened, 115
- Attempted coups, 138
- Attenborough, Sir David, 173
- Auschwitz, 44
- Austria, 186
- Austria-Hungary, 41
- Availability of water, 210
- Average crop yields, 211
- Awnings, 182
- Börjesson, Pål, 192
- BAE Systems, 71
- Baez, Joan, 265, 266, 270
- Bangladesh, 182
- Bank of China, 159
- Banking on Climate Change 2019, 159
- Banks aligned with climate disaster, 159
- Banks sponsor fossil fuel giants, 163
- Barclays, 159
- Baring, Anne, 15
- Barnaby, Frank, 65
- Bathurst, Chris, 189
- Battleships, 43
- Bay of Fundy, 189
- Beach, David, 189
- Bedjaoui, Muhammad, 55
- Beef is environmentally harmful, 205
- Behind Enemy Lines, 75
- Belarus, 62
- Benefits of equality, 95, 96
- Bering Strait land bridge, 10
- Bhutto, Zulfikar Ali, 65
- Big Brother, 139
- Big event needed, 137
- Bill of Rights, 25
- Binary plants, 198
- Biodiversity, 158
- Biodiversity conservation, 205
- Biogas, 194
- Biomass, 178, 179, 191–193
- Birth control, 250
- Bitterness of conflicts, 138
- Black Hawk Down, 75
- Blair, Bruce G., 56
- Blowin' in the Wind, 271
- Bob Dylan's paintings, 271
- Boeing, 71
- Bohr, Niels, 63
- Bohr-Wheeler theory, 63
- Bolsonaro on homosexuals, 155
- Bolsonaro, Jair, 155
- Bolton, John, 244
- Bombs, 244
- Booker T. Washington, 36
- Books by Lester R. Brown, 203
- Bottom half of humanity, 98
- Boycott protesting segregation, 35
- Brazil, 158, 186
- Bread and circuses, 223
- Breitbart News popularized alt-right, 236
- Breivik, Anders Behring, 77
- Brexit, 75
- Brexit and refugees, 249
- Britain, 41
- British used poison gas in Iraq, 109
- British-American coup of 1953, 114
- Brose Eric, 41
- Brown, Lester R., 203
- Brundtland Report, 211
- Brutal, violent attack, 157
- Brutalization of values, 43
- Buffet, Warren, 96
- Burned at the stake, 135
- Bush administration, 142
- Bush family and Hitler, 44
- Bush political dynasty, 45
- Bush was obsessed with Iraq, 112
- Bush, George W., 44

- Bush, Prescott, 44
Bush/Nazi connection, 45
- Caldecott, Helen, 46
Call of Duty, 77
Calogero, Francesco, 57
Campaigns that confuse the public, 169
Canada, 186, 198
Canadian Arctic, 250
Capitalism, 219
Carbon budget, 159, 174
Carbon emissions, 179
Carbon footprint, 174
Carbon-rich soils, 214
Carrying capacity, 207
Catastrophic climate change, 173, 211, 216, 225
Catastrophic global war, 43
Catastrophic mistake, 56
Catastrophic nuclear war, 59, 60
Cathode, 199
Catholic Church, 31
Cattle emit methane, 207
Cellulostic ethanol, 195
Censorship of the news, 104, 143
Central Atlantic region, 197
Central Intelligence Agency, 151
Chad, 69
Chain-reacting pile, 63
Chance of survival, 59
Changes of diet, 250
Charge acceptors, 177
Charge donors, 177
Charlottesville rally, August 2017, 236
Chemical bonds, 179
Chemical properties, 63
Chernobyl disaster, 62
Children killed by wars, 54
China, 69, 186
China's falling water table, 213
China's population policy, 213
Chomsky, Noam, 153, 154, 244
Christian nationalism, 244
Christianity, 36
Chuckman, John, 103, 138
CIA, 100, 133–135
CIA insider Susan Lindauer, 137
CIA torture report, 144
Civil rights movement, 35, 39
Civil society, 59
Civil war, 68
Civil wars, 69
Civil Works Administration, 216
Civilian Construction Corps, 216
Civilian victims of war, 54
Civilians as targets, 59
Clark, General Wesley, 67
Class warfare, 96
Clean energy, 173
Climate and environment, 75
Climate change, 62, 66, 179, 214
Climate change and agriculture, 212
Climate change denial, 166, 216, 223, 244
Climate crisis, 159, 172, 174, 176, 219, 298
Climate emergency, 170–172, 216
Clinton, Hillary, 121
Clock is ticking, 219
Cloud cover, 179, 191, 194
Coal, 66
Coal and steel, 45
Coal mining, 162
Coal power, 162
Coal-burning plants, 184
Coal-fired power plant, 163
Cold reservoir, 190
Cold War, 56, 68, 104, 134, 136, 144
Collapse of our civilization, 173
Colonialism, 95
Colonialism and World War I, 43
Come together and save ourselves, 225
Communications of millions, 142
Communist Party, 46
Compressed hydrogen gas, 200
Computer games, 75
Concentrating photovoltaics, 177, 178
Confessions of Economic Hit-Man, 150

- Conservatories, 182
- Consolidated Silesian Steel, 45
- Construction energy, 184
- Consume more, 226
- Consumption of meat, 211
- Consumption of plant energy, 211
- Container ships, 66
- Contributions of Islamic culture, 116
- Control government policy, 133, 135
- Control of the planet's resources, 150
- Convection currents, 196
- Cook Strait, 189
- Cooking, 183, 194
- Cooking, solar, 183
- COP24, 172
- Corbyn, Jeremy, 170
- Core aspirations, 146
- Core meltdown, 62
- Corporate oligarchs, 133, 136, 216
- Corporate oligarchy, 106
- Corporations, 144
- Corrupt governments, 105
- Cost of war, 43
- Counterculture, 261
- Coup overthrowing Mosaddegh, 114
- Coups, 143
- Coups, torture, and illegal killing, 104
- Court of world opinion, 36
- Crime against human civilization, 244
- Crimes against indigenous peoples, 15
- Critical mass, 63, 65
- Crop wastes, 191
- Cuban Missile Crisis, 46
- Cubic relationship, 183
- Cultivation of potatoes, 11
- Cultural inertia, 173
- Culture of violence, 68, 75
- Cumulative risk, 59
- Currents of molten material, 196
- Dangers of nuclear power, 62
- Danish economy, 183
- Dark government, 100, 103, 138
- Darrieus wind turbine, 184
- Davenport, Coral, 153
- David Pimental, 210, 214
- Davos Economic Forum, 174
- Decay of democracy, 52
- Deciduous trees, 182
- Decreased rainfall and agriculture, 212
- Deep state, 133, 135
- Deep wells, 198
- Deforestation, 155, 157, 183, 214
- Degradation of topsoil, 214
- Democracy Now, 125, 298
- Democracy requires knowledge, 134
- Democratic Party primary election, 215
- Democratic Republic of Congo, 69
- Denmark, 183
- Dependable source of income, 145
- Depleted uranium, 111
- Depletion of topsoil, 209
- Depression, 216
- Desert areas, 177, 178, 194, 200
- Desertification, 209
- Destruction of forests, 214
- Destruction of rain forests, 208
- Destruction of rainforests, 144
- Deteriorating living standards, 236
- Deterrence, flaws in concept, 54
- Developed countries, 210
- Developing countries, 145, 183
- Devil's Dynamo, 52
- Dictatorships, 134
- Die gedanken sind frei, 276
- Dietary changes, 250
- Dillehay, Tom, 10
- Directly used fuels, 66
- Dirty business of ISIS, 138
- Dirty wars, 133, 135
- Disarmament, 54
- Disease, 69
- Disease-resistant varieties, 207
- Disempowered TV viewers, 223
- Disinformation campaign, 169
- Distanced from killing, 77

- Divest from the fossil fuel industry, 169
- Double envelope construction, 182
- Drastically higher sea levels, 155
- Dreadnought-class ships, 41
- Drone air force, 138
- Drone operators, 77
- Drought, 209
- Drug addiction, 46
- Dry steam, 198
- Dual use power plants, 179
- Dung, 191
- Dylan Thomas, 270
- Dylan, Bob, 265, 266, 269
- Earliest people in the Americas, 10
- Earth Policy Institute, 203
- Earth's crust, 196
- Earth's rotation, 188, 196
- Earthquake activity, 197
- Earthquakes, 189
- East Asia, 69
- Eastern Europe, 62
- EAT-Lancet Commission, 205
- Ecological catastrophes, 222
- Ecological conscience, 145
- Ecological footprint, 207
- Economic growth, 215
- Economic hit men, 150
- Economic inequality, 219
- Economic influence, 52
- Economic interdependence, 21
- Economic tipping point, 228
- Edward Snowden, 133, 135
- Efficiency, maximum, 190
- Eisenhower's farewell address, 52
- ElBaradei, Mohamed, 57, 66
- Electrical power, 178, 179
- Electrical power costs, 184
- Electrical power generation, 179
- Electrical power grids, 185
- Electricity generation, 64, 66, 177, 183, 194, 198
- Electrochemical reactions, 199
- Electrode material, 200
- Electrolysis of water, 177, 199, 200
- Elephant in the room, 120
- Eliminating democracy, 133, 135
- Ellsberg, Daniel, 135
- Embrace of spying, 142
- Emergency, 171
- Emergency-scale transition, 226
- Emissions reduction curve, 226
- End of the fossil fuel era, 215
- Endemic conflict, 69
- Energy crisis, 62, 188
- Energy efficiency, 182
- Energy from the Ocean, 188
- Energy payback ratio, 184
- Energy savings, 182
- Energy storage, 186, 200
- Energy used for cooking, 210
- Energy-dependence of agriculture, 210
- Energy-intensive agriculture, 211
- Engineering firms, 151
- English Bill of Rights, 24
- Enormous dark branches, 146
- Enrichment, 57
- Enthalpy, 197
- Environmental activist, 266
- Environmental catastrophe, 223
- Environmental crisis accelerates, 223
- Environmental destruction, 158
- Environmental disaster, 226
- Environmental Protection Agency, 153
- Environmental reforms, 144
- Environmental sustainability, 205
- Epidemics of plant diseases, 210
- Equity, 64
- Era beyond fossil fuels, 207
- Eritria, 69
- Erosion of topsoil, 214
- Escalatory cycles of violence, 54
- Ethical principles, 54
- Ethical systems, 21
- Ethics, 21
- Ethiopia, 69

- Europe, 182
- Europe needs to be independent, 99
- Europe's right-wing parties, 249
- Evangelicals, 243
- Exceptionalism, 108
- Expanded German navy, 42
- Exposure of mistakes, 139
- External circuit, 199
- Extinction Rebellion, 171
- Extortion, 66, 150
- Extra-judicial killings, 138
- Extrajudicial killing, 144
- Exxon had the best climate models, 167
- Exxon knew, 166
- Exxon's 1982 internal memo, 167

- Fahrenheit 11/9, 125
- Failure of water supplies, 209
- Falling water tables, 207
- Fallout, 55
- Family planning, 250
- Famine, 58, 173, 208, 210, 213
- Far-right neo-fascist organization, 241
- Farm Security Administration, 216
- Farm wastes, 194
- Fascism, 155
- Fast breeder reactors, 64
- Fast neutrons, 64
- Fatal accident, 57
- FBI, 100
- FDR's New Deal, 216
- Fear of communism, 46
- Federal Constitution of the United States, 25
- Federalist Papers, 25
- Feedback loops, 214
- Fermi, Enrico, 63
- Fertilizers, 210
- Fiber optics, 182
- Films that glorify war, 75
- Finance and distribution, 210
- Financial architects of Nazism, 44
- Financial reforms and regulations, 216
- Financing fossil fuel expansion, 159
- Finland, 62, 193
- Fire storms, 60
- Firearm and Confederate T-shirt, 236
- Firebombing of Dresden, 54
- Fish ladders, 188
- Fission of uranium, 63
- Fissionable isotopes, 57, 63
- Fissionable materials, 66
- Flood control, 188
- Fly more, 226
- Focal axis, 178, 179
- Folk music, 270
- Food and Agricultural Organization, 208, 214
- Food and agriculture reform, 205
- Food calories per capita, 211
- Food losses and waste, 205
- Food system is broken, 207
- Forced labor, 144
- Forest fires, 214
- Forest industry, 193
- Forest loss, 214
- Forge of Empires, 77
- Former Soviet Union, 69
- Fossil Free MIT, 169
- Fossil fuel corporations, 166, 223, 297
- Fossil fuel expansion, 159
- Fossil fuel extraction must stop, 173
- Fossil Fuel Report Card, 159
- Fossil fuels, 167, 184, 203, 207, 210
- Fourth Amendment trashed, 133, 136
- Fourth Estate, 142
- Fracked oil, 162
- France, 41, 69
- Fraudulent financial reports, 150
- Freedom from fear, 106, 146
- Freedom Party (Austria), 250
- Fridays for the Future, 176
- Friedrich Krupp AG, 43
- Frightened children, 285
- Frontline's documentary, 142
- Fruit, 207
- Fuel cells, 177, 194, 200

- Full Spectrum Warrior, 75
- Fusion energy, 67
- Future food-production, 208
- Galespie, April, 110
- Galileo, 135
- Gandhi, 35, 36
- GATT, 144
- General Dynamics, 71
- General Groves, 135
- Genocide, 54
- Genocides in the Americas, 15
- George H.W. Bush, 44
- George W. Bush, 44
- Geothermal energy, 193, 196
- Geothermal power, 197
- Geothermal power plants, 196, 197
- German naval buildup, 41
- Germany, 41
- Germany's armament industry, 44
- Giant coal corporations, 153
- Gibson, Bob, 266
- Glacial melting, 214
- Glaring contradiction, 133, 135
- Global climate, 158
- Global climate strike, 176
- Global economic interdependence, 145
- Global hegemony, 69
- Global hegemony by means of military force, 101
- Global Inequality organization, 98
- Global power, 69
- Global warming, 62, 66, 179, 210
- Globalization, 150
- Golden Dawn party (Greece), 250
- Goodman, Amy, 67, 125, 170, 298
- Gordiano Bruno, 135
- Gore, Al, 227
- Government spying, 143
- Governmental secrecy, 138
- Governments left to wither, 225
- Graphite electrodes, 200
- Graphite moderator, 63
- Grave implications, 52
- Great Depression, 216
- Great-power competition, 69
- Greece, 41, 197
- Green Berets, 75
- Green New Deal, 216, 297
- Green Party, 123
- Green Revolution, 207, 210, 211
- Greenhouse gas emissions, 154, 250
- Greenhouse gases, 194
- Greenhouses, 179
- Greenland, 62, 250
- Grey, Colin S., 56
- Grids, 185
- Griffith, D.W., 31
- Gross, wholesale spying, 133, 135
- Groundwater levels, 213
- Growing populations, 215
- Growth of wind power, 183
- Guardian, 171
- Guilt, 54
- Guinea pig domestication, 11
- Gulf of Maine, 189
- Gulf War, 111
- Gun-type bomb, 65
- Guns, 43
- Guns in schools?, 75
- Guterres, Antonio, 173
- Guthrie, Woodie, 270
- Habias Corpus trashed, 133, 136
- Hair-trigger alert, 56
- Half-reactions, 199
- Halt extraction of fossil fuels, 173
- Hamilton, Alexander, 25
- Hammurabi's Code, 21
- Hanauer, Nick, 96
- Harvesting, 192
- Health and social problems, 96
- Healthcare a human right, 215
- Heat engines, 190
- Heat exchange, 182
- Heat flow, 197

- Heat pumps, 182, 185
- Heat-collecting plate, 182
- Heaters, 194
- Heather Heyer murdered, 236
- Heating of houses, 198
- Heliostatic reflectors, 179
- Henderson, Bill, 225
- Henry David Thoreau, 35
- HEU, 64
- High enthalpy resources, 197
- High-yield varieties, 207
- Highly enriched uranium, 57, 64
- Highly-enriched uranium, 59
- Highway development, 215
- Hiroshima, 62, 63, 145
- Hitler as Chancellor, 46
- Hitler's rise to power, 43, 45, 46
- Hitler, Adolf, 236, 251
- Hitler-Trump parallels, 251
- HMS Dreadnought, 42
- Hobson, John A., 95
- Homeland Security, 100
- Honge oil, 193
- Hoodbhoy, Pervez, 65
- Horton, Scott, 139
- Hot dry rock method, 198
- Hot reservoir, 190
- House of Commons, 170
- Howitzers, 43
- Huaca PrietaS, 10
- Hubris, 102
- Human failings, 56
- Human hands used as currency, 108
- Human life will have no value, 158
- Human rights, 163, 266
- Human rights activist, 266
- Human rights in Brazil, 158
- Human rights trashed, 133, 136
- Humane response to refugees, 250
- Humanitarian law, 54, 56
- Humanitarian reforms, 144
- Humanitarian tragedies, 74
- Huntington Ingals, 71
- Hussein, Saddam, 110
- Hydraulic motors, 189
- Hydroelectric power, 186
- Hydroelectric storage, 185
- Hydrogen, 177, 199, 200
- Hydrogen from algae, 194
- Hydrogen technologies, 199
- Hydrogen technology, 185, 189, 194
- Hydrological cycle, 60
- Hydropower, 179, 186, 193
- IAEA, 66
- Iceland, 186, 197
- Iceland's financial crisis was brief, 107
- Illegal collection of private data, 101
- Illegal killings, 143
- Illegal we do at once, 133, 135
- Illegality of nuclear weapons, 54
- Immediate action required, 173
- Imperialism, A Study, 95
- Imported oil, 192
- Incas built terraces, 11
- Incendiary bombings, 60
- Increased arms trading, 74
- India, 59, 69, 190
- India's nuclear weapons, 64
- Indigenous peoples, 15
- Indigenous protests against oil drilling, 163
- Indiscriminate mass slaughter, 54
- Indonesia, 197
- Industrial Recovery Act, 216
- Industrial Revolution, 41, 95
- Industrialized nations, 95
- Inequality, 96
- Infrastructure, 216
- Initial investment, 178, 182
- Inside Climate News, 167
- Institution of war, 59
- Institutional inertia, 173
- Insulating shutters, 182
- Insulation, 182
- Intermittency, 185, 186, 200
- Internal assessments, 167

- International control, 57, 64
- International cooperation, 75
- International laws, 21
- Internet corporations, 139
- Invasion of Transvaal, 42
- Invention of agriculture, 21
- Investment, initial, 182
- IPCC, 159, 163, 172, 210, 227
- Iran, 59, 68, 69
- Iran nuclear deal, 74
- Iran's oil and gas resources, 113
- Iraq, 68
- Iraq's war with Iran, 110
- Irish Potato Famine, 210
- Irish potato famine, 11
- Iron and steel company, 43
- Irreversible warming, 166
- Irrigation, 188, 210
- Irrigation of arid lands, 209
- Isaiah 45 = 45th President, 243
- ISIS, 103
- Isotopes, 63, 64
- Isotopes of uranium, 63
- Israel, 69
- Israel and oil motivated Iraq war, 113
- Israel's nuclear weapons, 64
- Italy, 41, 197
- Itapú Dam, 186

- Japan, 41, 190, 197
- Jaws of power, 134
- Jefferson, Thomas, 134
- Jewish employees, 46
- Jewish plot for white genocide, 235
- Joan Baez Award, 266
- Jobbic party (Hungary), 250
- John Perkins, 150
- Jonsdottir, Birgitta, 106
- JPMorgan Chase, 159

- Kaiser Wilhelm II, 42
- Kamchatka Peninsula, 197
- Kavanaugh, Brett, 125
- Keep that oil in the ground, 173
- Kelvin degrees, 190
- Kent State Massacre, 285
- Kermit Roosevelt, 150
- KGB, 134
- Khan, A.Q., 65
- Killing them, 155
- Kim Jong-un, 71
- Kindness, 21
- Kinetic energy, 183
- King's Riverside Church speech, 280
- King, Martin Luther, 46
- Kissinger, Henry, 133, 135
- KKK classified as a hate group, 31
- KKK cross-burning, 31
- KKK responsible for many lynchings, 31
- Klein, Naomi, 219
- Klu Klux Klan, 31
- Koch brothers, 170
- Korean Peoples Army, 71
- Kristallnacht, 46
- Krupp family business, 43
- Kurile Island chain, 197

- L-3 Communications, 71
- La Grande complex, 186
- Lancet report on food reform, 205
- Land of the Spotted Eagle, 17
- Landfills, 194
- Landler, Mark, 153
- Lang, Tim, 205
- Largest company in Europe, 43
- Laterization, 215
- Latitude, 191
- Laws acting on individuals, 25
- Laws binding on individuals, 145
- Lebanon, 68
- Legal systems, 21
- LeMay, General Curtis E., 56
- Leonardo-Finmeccanica, 71
- Less animal products, 205
- Lester Brown, 213
- LEU, 64

- Libya, 68
- Life.styles from mass media, 221
- Lifestyles, 182
- Light pipes, 182
- Light weapons, 68
- Lightning strikes, 214
- Limiting fossil fuel production, 225
- Liquefied natural gas, 162
- Living from war, 52
- Llama domestication, 11
- Lobbying against climate change action, 169
- Lockheed Martin, 71
- Los Alamos, 135
- Loss of cropland, 209
- Loss of profits, 144
- Love your enemies, 39
- Low enriched uranium, 64
- Low enthalpy resources, 197
- Low-carbon economy, 173
- Ludendorff, 46
- Luther Standing Bear, 17
- M.S. Swaminathan, 207
- M5, 134
- Mafia, 65
- Magna Carta, 23
- Magna Carta trashed, 133, 136
- Magnesium, 188
- Magnetic bottles, 67
- Mahatma Gandhi, 35
- Main grain types, 212
- Mainstream media, 133, 136
- Maize, squash and beans, 11
- Making excuses, 223
- Man-made disaster, 173
- Mantle of the earth, 196
- Marching down Pennsylvania Avenue, 31
- Marginal land, 214
- Mariachi Reyna de Los Angeles, 300
- Marine air, 184
- Mario Giampietro, 210
- Markets solve all problems?, 225
- Marshall Plan, 99
- Martin Luther King, 35, 280
- Martyr to the truth, 135
- Mason, George, 25
- Mass illegal spying, 146
- Mass media, 75, 220
- Massive nuclear retaliation, 54
- Massive spying, 134, 136
- Mattas, James, 69
- Mature forests, 214
- Maximum efficiency, 190
- McInnes, Gavin, 241
- McKibben, Bill, 220
- Meat consumption, 211
- Media as a battleground, 220
- Media neglect of climate change, 222
- Media sabotage progressive politics, 99
- Media withhold information, 143
- Melting of glaciers, 207
- Merkel, Angela, 249
- Methane, 194
- Microscopic fixes for vast problems, 225
- Middle East, 177
- Middle East conflicts, 74
- Migration, political reactions, 249
- Militarism in North Korea, 69
- Military Expenditure Database, 71
- Military technology, 74
- Military-industrial complex, 43, 52, 99
- Mining ancient groundwater, 213
- Miscalculation, 56
- Miscanthus, 193
- Misplaced power, 52
- Missile defense system, 59
- Missile Envy, 46
- Mistaken for a missile strike, 56
- Modern agriculture, 210
- Modern powerholders, 220
- Modern societies, 221
- Modernism, 59
- Modernization of Iran, 114
- Molten lava of volcanoes, 198
- Molten salt, 179
- Monbiot, George, 171, 223

- Monetizing underground “assets”, 166, 223
- Money and growth our main concerns, 174
- Monocultures, 210
- Moon’s gravitational field, 188
- Moore, Michael, 125, 154
- Moral responsibility, 174
- More military spending, 74
- More violent conflicts, 74
- Mossad, 134
- Mossadegh, 150
- Most dangerous organization in history, 154, 244
- Mountain passes, 184
- Movement of refugees, 74
- MUFG in Japan, 159
- Multigenerational families, 221
- Multinational network, 45
- Multiple interrelated crises, 173
- Murder, 150
- Musharraf, Pervez, 65
- Mustard gas and nerve gas, 110
- My Indian Boyhood, 17
- My Lai Massacre, 285
- My People, the Soux, 17

- Nagasaki, 62, 63, 145
- Narrow and shrinking window, 172
- National Front party, 250
- National Geographic Chanel, 220
- National pride, 59
- National Rifle Association, 75
- National Security Agency, 100, 143, 150
- Nationalism, nuclear, 65
- NATO against Russia, 138
- NATO now violates the UN Charter, 100
- Natural gas, 210
- Naval arms race, 41, 46
- Naval supremacy, 42
- Nazi and neo.Nazi symbols, 241
- Nazi Germany, 44
- Nazi Party, 44, 46
- Nazi salute, 236
- Nehru, 36

- Neofascism, 155
- Neoliberalism, 225
- Neptunium, 66
- Net carbon sink, 205
- Network Knowledge, 142
- Network of pipes, 182
- Neuborne, Burt, 251
- Neutral countries, 54
- Neutrons, 63
- New Agenda Resolution, 56
- New global agricultural revolution, 205
- New Joan of Arc, 174
- New York Times, 135, 142
- New Zealand, 189, 197
- Newport Folk Festival of 1959, 266
- Nick Hanauer’s TED talk, 96
- Nineteen Eighty-Four, 133, 136
- No President can resist, 138
- No-first-use of nuclear weapons, 101
- Nobel Peace Prize, 36, 227
- Nobel Prize in Literature, 269
- Non-discrimination principle, 144
- Non-dollar trading, 102
- Non-Proliferation Treaty, 64
- Nonviolent civil disobedience, 35
- Nonvoters, 125
- Norman Borlaug, 207
- North America, 182, 197
- North Korea, 59, 69
- North Korea’s nuclear weapons, 64
- Northrop Grumman, 71
- Norway, 186
- Norwegian mass-murderer, 77
- NPT, 64
- NPT, threatened failure of, 65
- NSA Headquarters, 139
- NSA Power Points, 139
- Nuclear arms race, 37, 46
- Nuclear black market, 57
- Nuclear darkness, 58
- Nuclear deterrence, flaws, 57
- Nuclear disarmament, 146
- Nuclear environmental catastrophe, 60

- Nuclear families, 221
- Nuclear fusion, 67
- Nuclear nationalism, 65
- Nuclear power dangers, 62
- Nuclear power generation, 46, 62
- Nuclear proliferation, 57, 62, 64, 65
- Nuclear reactor, 63
- Nuclear reactors, 57
- Nuclear terrorism, 57, 59, 65
- Nuclear war by accident, 66
- Nuclear warhead stockpiles, 71
- Nuclear weapons, 46
- Nuclear winter, 60
- Nucleon number, 63
- Nuremberg Principles, 134
- Nuts, 207
- Obama's decision to continue, 142
- Obama, Barak, 99
- Obscenely enormous military budget, 216
- Obsession with secrecy, 139
- Ocasio-Cortez, Alexandria, 215, 216, 220, 297
- Occupy Wall Street, 99
- Ocean energy, 193
- Ocean thermal energy conversion, 190
- Offshore winds, 184
- Ogallala aquifer, 209, 213
- Oil, 210
- Oil and war in Iraq, 110
- Oil content, 194
- Oil-rich regions, 134, 137
- Older people marginalized, 221
- Oligarchies, 134
- Oligarchs own the government, 133, 136
- Onshore winds, 184
- Open diplomacy, 134
- Operation Sophia (a genocide), 15
- Opposition to Viet Nam and Iraq wars, 266
- Organic wastes, 194
- Organized criminals, 65
- Orgy of external cruelty, 108
- Orwell's dystopian prophesy, 134, 136
- Orwell, George, 133, 136
- Orwellian name, 137
- OTEC, 190
- Ottoman Empire, 41
- Our house is on fire, 174
- Our leaders are behaving like children, 173
- Our older brothers can help us, 15
- Overdrawn aquifers, 207
- Overgrazing, 209
- Oxygen, 177, 199
- Ozone layer, 58, 61
- Pacific Ocean, 197
- Package of broadcasts, 222
- Pakistan, 59, 69
- Pakistan's nuclear weapons, 65
- Paper industry, 193
- Parabolic collector, 182
- Paraguay, 186
- Paranoid times, 244
- Paris Agreement, 153, 163, 172, 205
- Paris Climate Agreement, 74, 154
- Paris goals, 226
- Part-time clown, full-time sociopath, 154
- Party for Freedom, 250
- Patagonia, 250
- Patriot Act, 137
- Paul Ehrlich, 61
- Payoffs, 150
- Peace in Colombia, 74
- Peaceful resolution of conflicts, 145
- Peak demand, 186
- Peak solar power, 178
- Pearl Harbor, 75
- Pelamis Converter, 189
- Pelosi, Nancy, 298
- Pentagon Papers, 135
- People themselves, 134
- People walked from Siberia, 11
- People's Party-Our Slovakia, 250
- Per capita energy use, 177, 182
- Permanent arms industry, 52
- Persecution of Christians, 46
- Persson, Göran, 192

- Pesticides, 210
Petroleum and war, 108
Petroleum reserves, 177
Petroleum-based agriculture, 211
Philippine Islands, 197
Photosynthesis, 191, 212
Photovoltaic cells, 182
Photovoltaic efficiency, 178
Photovoltaic panels, 177
Photovoltaic production costs, 179
Photovoltaics, 183
Photovoltaics, cost of, 178
Photovoltaics, global market, 179
Physical properties, 63
Piki Mach'ay, 11
Pipeline wars, 112
Pipes, network, 182
Plans for blockade, 42
Plant-based foods, 205
Platinum electrodes, 200
Plutonium, 57, 63, 64
Poison gas used in Iran war, 110
Politeness, 21
Political influence, 52
Political instability, 74
Politics of global warming, 166, 223
Pollination of corn, 212
Pollination of rice, 212
Pongamia pinnata, 193
Popular music history, 261
Population, 177
Population density, 178, 193
Population growth, 208, 214
Population of Norway, 138
Populism in the US, 250
Portugal, 189
Post-fossil-fuel era, 211
Potato cultivation, 11
Potentially illegal spying, 142
Potentially irreversible threat, 172
Poverty, 207
Power reactors, 64
Powerholders, 143
Prakash, Varshini, 297
Pre-Colombian Argentina, 11
Predatory delay, 225, 226
Preemptive war, 112
Preparation for war, 46
Prescott Bush, 44
President claims right to kill, 133, 136
Preventing an ecological apocalypse, 223
Primary energy, 182
Primary fuels, 179
PRISM, 139
Private consulting companies, 151
Processing, 192
Progressive values, 216
Project for a New American Century, 100
Project to destroy the Amazon, 157
Proliferation risks, 64, 65
Proliferation, nuclear, 62, 64
Promotes political violence, 241
Propaganda, 220
Propaganda and entertainment, 222
Propeller-like design, 184
Prosperity gospel preacher, 244
Protecting whistleblowers, 146
Protection of whistleblowers, 106
Protein-rich residues, 193
Protests against the Vietnam War, 280
Protons, 63
Proud Boys, 241
Pu-239, 63–65
Public education, 220
Public opinion, 62, 220
Public work projects, 216
Pulses, 207
Queen Elizabeth I, 11
Racial discrimination, 39
Racism, 216, 219
Racism, colonialism and exceptionalism, 107
Radar, 56
Radical transformation, 173
Radioactive fallout, 62

- Radioactive graphite, 62
- Radioactive grass, 62
- Radioactive nuclei, 196
- Radioactive uranium, 62
- Radioactive waste disposal, 62
- Radiocarbon dates, 10
- Rainfall, 178, 193
- Raleigh, Sir Walter, 11
- Rape, 155
- Rapeseed, 192–194
- Rapeseed oil, 179, 191, 193
- Rapid and unprecedented changes, 172
- Rapid population growth, 209
- Raytheon, 71
- Rearmament, 46
- Red Dawn, 75
- Red meat, 207
- Redemptive love, 37
- Reduced consumption of meat, 250
- Reflectors, 179
- Refrigerators, 182
- Refugees, 155
- Regional Defense Strategy, 69
- Reichstag election, 1933, 46
- Relocation of people, 188
- Renewable energy, 178, 185, 215, 297
- Renewable energy infrastructure, 216
- Renewable energy systems, 200
- Renewable energy technology, 193
- Renewable natural gas, 194
- Renewables cheaper than fossil fuels, 201
- Reporting climate change, 220
- Reprocessing, 57
- Reprocessing fuel rods, 64
- Republican Party, 153, 244
- Reserves of uranium, 64
- Reservoirs, 186
- Resource wars, 77
- Resources per capita, 207
- Restoring democracy, 99
- Revenge and counter-revenge, 54
- Reza Shah, 113
- Richard Wilkinson's TED talk, 96
- Rift Valley, 197
- Rigged elections, 150
- Right-wing parties, 46
- Rights of Indigenous peoples, 163
- Ring of Fire, 197
- Rise like lions, 134, 137
- Rising energy prices, 179
- Rising ocean levels, 207
- River of money, 52
- Robock, A., 58
- Rockström, Johan, 205
- Role of the media, 220
- Roman Catholic Church, 46
- Roosevelt, Eleanor, 277
- Roosevelt, Franklin D., 216
- Rosenfeld, Steven, 251
- Rotblat, Sir Joseph, 146
- Route down the Pacific coast, 11
- Royal Bank of Canada, 159
- Rumsfeld, Donald, 110
- Russia, 41, 57, 62, 69, 197
- Sabotaging renewable energy, 153
- Sadam Hussein, 67
- Saddam invaded Kuwait, 110
- Sahel, 209
- Sakharov, Andrei, 139
- Salination, 209
- Salix viminalis, 192
- Salter's Duck, 189
- Salter, Stephan, 189
- Samsø 185
- Sanctions led to 500,000 deaths of children, 111
- Sanders Institute, 219
- Sanders, Senator Bernie, 121, 216, 297
- Saving the future, 173
- Schoolstrile for climate action, 176
- Sea level rise, 155
- Secrecy and democracy incompatible, 103
- Secrecy and nuclear weapons, 146
- Secrecy versus democracy, 133–135
- Secrecy, democracy and nuclear weapons, 105

- Secret diplomacy, 134, 138
Secret land purchases in Africa, 105
Secret trade agreements, 102
Secret trade deals, 144
Secret treaties, 134
Secret weapons development, 135
Secretive Shadow Government, 139
Secure jobs, 145
Security Council, 68
Seeger at the Clearwater Festival, 277
Seeger, Peggy, 300
Seeger, Pete, 273
Segregation, 35
Self-congratulatory mood, 108
Semi-automatic rifles, 241
Semiconducting materials, 177
Sequestered carbon, 214
Several hundred million deaths, 54
Severe droughts, 61
Sex, 150
Shah of Iran, 150
Shell and Exxon knew, 166
Shelley, 134, 137
Shi'ites abandoned and slaughtered, 111
Short-rotation forests, 192
Shortened food chain, 250
Shot by the Ohio National Guard, 285
Shrinivasa, Udishi, 193
Shrouded in secrecy, 144
Siberia, 250
Silicon, 177
Silicon Valley, 143
SIPRI, 71
SIPRI Yearbook, 2017, 74
Slandering scientists, 169
Slave laborers, 44
Small arms, 68, 69
Small arms, 639 million, 69
Smith, Dan, 74
Smith, Martin, 143
Smoke destroys health, 170
Snowden's revelations, 133, 136
Snowden, Edward, 103, 133, 135, 138, 142, 143
Social conscience, 145
Social Democrats, 46
Social inequality, 210
Social Security Administration, 216
Societal verification, 146
Soil erosion, 183, 209, 214
Solar constant, 191
Solar cooking, 177, 181, 183
Solar design in architecture, 177, 182
Solar energy, 177, 191, 193, 200
Solar heat collectors, 182
Solar parabolic troughs, 179
Solar thermal power, 177, 180
Solar water heating, 177, 182
Somalia, 68, 69
South Africa's nuclear weapons, 64
South America, 133, 135, 197
Southwest Asia, 69
Soviet-style revolution, 46
Spawning grounds, 188
Speak out in clear language, 174
Spemcer, Richard B., 235
Spent \$674 billion on new reserves, 169
Spiritual influence, 52
Stabilization of population, 250
Stars and stripes, 244
Starvation, 69, 210
Stein, Jill, 121, 123
Stern Report, 212, 214
Stockholm Resilience Center, 205
Stone tools, 10
Stop the expansion of extraction, 226
Strategic competition, 75
Submarginal land, 208
Subnational organizations, 65
Subsidies, 179
Sudan, 68
Sugar beets, 191, 192
Summer water supplies, 207, 214
Sun-heated air, 182
Sunlight, 177, 178, 191

- Sunrise Movement, 216, 297
- Superpower status, 69
- Swamps, 194
- Sweden, 62, 178, 192, 193
- Sweden Democrats party, 250
- Swimming pools, heating, 182
- Swings to the right in Europe, 249
- Sykes-Picot Agreement, 138
- Sykes-Picot agreement, 103
- Symbols of power, 220
- Syria, 68

- Tamil Nadu OTEC station, 190
- Tanks, 43
- Tar sands oil, 162
- Targeted individuals, 77
- Tax of 70% on ultra-wealthy, 216
- Technical defects, 56
- Tectonic plates, 196, 197
- TED Talks, 96
- Television part of education, 220
- Television underestimated, 220
- Temperature and agriculture, 212
- Temperature inversion, 60
- Terrorism, 69
- Terrorism, nuclear, 57
- Thales Group, 71
- The 2016 US presidential election, 119
- The Birth of a Nation, 31
- The Case for Optimism (TED), 228
- The Geysers, 198
- The Great Transition, 203
- The Guardian, 171, 205, 216, 220, 223
- The Potato Eaters, 11
- The rules have to be changed, 173
- The world's 10 richest billionaires, 98
- Thermal buffer, 182
- Thermal conductivity, 197
- Thermodynamics, 190
- Thermonuclear bombs, 64
- Thermonuclear reactions, 67
- Thermonuclear war, 173
- Thermonuclear weapons, 21

- Thirty Years' War, 43
- Threat to white womanhood, 31
- Three Gorges Dam, 186
- Three sisters, 11
- Thunberg, Greta, 173, 174
- Thyroid cancer, 62
- Thyssen family, 43
- Thyssen, August, 43
- Thyssen, Fritz, 43, 45, 46
- Thyssen-controlled bank, 45
- Tidal level differences, 188
- Tidal power, 188
- Tidal stream, 188
- Tierra del Fuego, 197
- Time Magazine, 266
- To control Soviet Union, 135
- Tobacco and fossil fuel industries, 169
- Tokyo, firebombing, 54
- Tom Cruse, 75
- Toon, O., 58
- Top Gear, 226
- Top Gun, 75
- Torture, 143, 155
- Torture, murder and genocide, 107
- Total global supremacy, 69
- Total reaction, 199
- Trade unions, 46
- Trading with the enemy, 44
- Traditional agriculture, 211
- Traditional societies, 221
- Trans Pacific Partnership, 144
- Trans-Pacific Partnership, 105
- Transportation, 192
- Transportation of grain, 210
- Treaty of Versailles, 46
- Triple Alliance, 41
- Triple Entente, 41
- Triumphant denialism, 226
- Tropical regions, 190
- Trump digs coal, 154
- Trump is Alt-Right with us, 236
- Trump of the Tropics, 155
- Trump sent by God to be King, 243

- Trump's climate change denial, 153
Trump's father a KKK member, 31
Trump, Donald, 75, 125, 153, 172, 216, 243, 244, 250, 251, 297
Truthout, 170
TTAPS Study, 60
TTIP, 144
TTIP fast-tracked, 105
Turbines, 189
Turco, R., 58
Turkey, 197
Two billion malnourished, 207
Two billion risk starvation, 62

U-235, 63
U-238, 63, 64
U-boats, 43
UK declares climate emergency, 170
Ukraine, 62
Ultra-deepwater oil, 162
Ultracentrifuges, 64, 65
UN General Assembly, 54, 56
UN Security Council, 69
UN's Agenda 2030, 74
Unauthorized act, 57
Undercover operations, 134
Unemployment, 216
UNEP, 214
Unequal distribution of incomes, 95
Union of Concerned Scientists, 172
Unite the Right rally, 236
United Kingdom, 41, 69
United Nations, 145
United States, 41, 57, 69, 198
United States Constitution, 25
United States of Secrets, 142
United Technologies, 71
Universal healthcare, 297
Unprecedented changes, 174
Unsustainable lifestyles in media, 226
Unsustainable use of groundwater, 213
Unwarranted influence, 52
Uranium, 63
Uranium enrichment, 65
Uranium reserves, 64
Urban growth, 215
Urbanization, 209
Urgency of Green New Deal, 219
US Democratic Party, 297
US Evangelicals, 243
US nuclear weapons in Europe, 101

Vacuum, partial, 182
Values from the mass media, 221
Van Gogh, Vincent, 11
Vanderbilt University, 10
Vanguard America, 236
Variety, 142
Vast proportions, 52
Vegetables, 207
Vertical shaft design, 184
Vicious circle, 46
Viet Nam War, 37
Vietnam war, 135
Violation of democracy, 144
Violation of democratic principles, 144
Violation of the UN Charter, 101
Volatile liquid, 182
Volcanic activity, 197
Volcanic regions, 196
Von Sponeck, Hans Christian, 100

Wade, Lizzie, 10
Wales, 62
Wall Street, 145
War, 68, 69, 244, 266
War as an institution, 52
Washington Naval Treaty, 41
Water, 199
Water tables, 209
Water-heaters, 183
Wave energy, 189
Wave farms, 189
We Are All Loyal Klansmen, 31
We are many, 134, 137
We shall overcome, 268

- We want to protect you, 134, 136, 146
- We Were Soldiers, 75
- Wealthy families, 150
- Weapons-usable materials, 64, 66
- Weapons-usable Pu-239, 64
- Weatherproof shell, 182
- Western Europe, 69
- Western hegemony, 134, 137
- What did you learn in school today?, 275
- What have they done to the rain?, 268
- Wheeler, John A., 63
- When at Times the Mob is Swayed, 251
- Where have all the flowers gone?, 274
- Whistleblowers, 133, 135
- White nationalists, 235
- White Revolution, 114
- White supremacists, 235
- Wholesale deforestation, 158
- Wholesale electronic spying, 133, 135
- Wild vegetation, 214
- Wilkinson, Richard, 96
- Win-win diet, 207
- Wind electrical power costs, 184
- Wind energy, 183, 193, 200
- Wind parks, 183
- Wind power, 179, 185
- Wind turbines, 183, 184
- Wind velocity, 183, 184
- Windmill parks, 185
- Winning slowly means losing, 226
- Without knowledge or consent, 139
- Wolfowitz Doctrine, 69
- Wood, 179, 183, 191, 192
- Woodstock, 261
- World food supply, 215
- World of Warcraft, 77
- World Trade Center, 137
- World Trade Center, 2001, 59
- World War I, 41, 43, 46, 134, 138
- World War II, 43, 60
- Worldwatch Institute, 203, 213
- WSEC/PBS Springfield, 142
- X-ray microscopy, 266
- Yasgur, Max, 261
- Yongbion Research Center, 71
- YouTube, 226
- Zimbabwe, 69