

ELIMINATING THE CAUSES OF WAR

April 2, 2022

INTRODUCTION¹

The danger of nuclear war

War was always madness, always immoral, always the cause of unspeakable suffering, economic waste and widespread destruction, and always a source of poverty, hate, barbarism and endless cycles of revenge and counter-revenge. It has always been a crime for soldiers to kill people, just as it is a crime for murderers in civil society to kill people. No flag has ever been wide enough to cover up atrocities.

But today, the development of all-destroying thermonuclear weapons has put war completely beyond the bounds of sanity and elementary humanity.

Can we not rid ourselves of both nuclear weapons and the institution of war itself? We must act quickly and resolutely before our beautiful world is reduced to radioactive ashes, together with everything that we love.

Population pressure and war

Thomas Robert Malthus (1766-1834) is famous for his studies of the social effects of population pressure. In his second *Essay on Population*, published in 1803, Malthus looked at all the societies then known through the accounts of historians and explorers.

In many of the societies which Malthus described, a causal link can be seen, not only between population pressure and poverty, but also between population pressure and war. As one reads his *Essay*, it becomes clear why both these terrible sources of human anguish saturate so much of history, and why efforts to eradicate them have so often met with failure: The only possible way to eliminate poverty and war is to reduce the pressure of population by preventive checks, such as birth control or late marriage, since the increased food supply produced by occasional cultural advances can give only very temporary relief.

Tribalism and nationalism

Human emotional nature has not changed much since our ancestors lived in small, genetically-homogeneous tribes, competing with other tribes for

¹This book makes use of my previously published book chapters, but new material has also been added.

territory on the grasslands of Africa. In this situation, the tribe as a whole was the unit upon which the Darwinian forces of natural selection acted. The whole tribe either survived or else perished in wars with competing tribes.

In such a situation, heroic self-sacrifice in war makes sense. If the tribe survives, the genes of the individual who died for his tribe will be passed on into the future by other tribal members who carry the same genes.

Today we all still have the emotions which make war possible, but these emotions are amplified by mass communication into love for a particular nation. Unfortunately, patriotic citizens are not only willing to die for their nation; they are also eager to kill those designated as enemies.

Military-Industrial Complexes

In his farsighted Farewell Address, U.S. President Dwight D. Eisenhower warned against the dangers of the military-industrial complex. Today, the world spends roughly two trillion dollars every year on armaments. This vast river of money, almost too great to be imagined, means that many people are making a living from war. It is the reason why war can be thought of as a social institution. It is one of the main reasons why war persists, although everyone knows that war is the source of much of the suffering that afflicts humanity

Resource wars

Many of the wars that plague the world today can be seen as resource wars. As populations grow, together with consumer demand, powerful nations compete for the limited and dwindling supply of natural resources. Wars in the Middle East, for example, would hardly have destroyed the region to such an extent if it had not been rich in oil and natural gas. It is predicted that many future wars will be centered on the right to water resources.

International law

One of the chapters in this book deals with the history of international law, from Hammurabi's Code and the Magna Carta to more recent developments, such as the Treaty on the Prohibition of Nuclear Weapons, which is a great achievement, despite being opposed by all the nuclear weapons states and their allies.

Reforming the United Nations

After the unspeakable horrors of World War II, delegates from 50 Allied nations met in San Francisco California. The purpose of the conference, which took place between 25 April and 26 June, 1945, was to set up an international organization that would be able to abolish the institution of war.

Article 2.4 of the United Nations 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, or in any other manner inconsistent with the Purposes of the United Nations.”

In other words, the purpose of the United Nations was and is to abolish the institution of war, However, the Charter which the delegates produced was too weak to achieve this goal. The United Nations, in its present form is a confederation, rather than federation. It lacks the key power of federations, the power to make laws that are binding on individuals.

A World Federation

To make it equal to the great task of abolishing the institution of war, the United Nations must be strengthened by giving it the powers of a federation. 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.

Other reforms are also needed: If the UN is to become an effective World Federation, it will need a reliable source of income to make the organization less dependent on wealthy countries, which tend to give support only to those interventions of which they approve. In fact the present income of the United Nations is laughably small in comparison to the tasks that are given to it. The income of the United Nations, strengthened and converted to a World Federation, should be increased by a factor of many hundreds.

Historically, the federal form of government has proved to be extremely robust and successful. Many of today’s nations are federations of smaller, partially autonomous, member states. Among these nations are Argentina, Australia, Austria, Belgium, Brazil, Canada, Germany, India, Mexico, Switzerland, Spain, South Africa and the United States.

Contents

1	THE UKRAINE WAR	9
1.1	The threat of nuclear war	9
1.2	Putin’s criminal invasion of Ukraine	9
1.3	The invasion cannot be called unprovoked	9
1.4	Russia’s understandable fears	10
2	TRIBALISM AND NATIONALISM	13
2.1	Ethology	13
2.2	Population genetics	23
2.3	Formation of group identity	25
2.4	Religion and ethnic identity	25
2.5	Tribal markings; ethnicity; pseudospeciation	26
2.6	The mystery of self-sacrifice in war	30
2.7	Fischer, Haldane, Hamilton and Wilson	30
2.8	Cooperation in groups of animals and human groups	31
2.9	Trading in primitive societies	31
2.10	Interdependence in modern human society	32
2.11	Two sides of human nature	32
2.12	Tribalism and agreed-upon lies	33
2.13	From tribalism to nationalism	33
2.14	Nationalism in Europe	34
3	RACISM, COLONIALISM AND EXCEPTIONALISM	63
3.1	Genocides in the Americas	63
3.2	Modern weapons and colonialism	64
3.3	Persistent effects of colonialism	66
3.4	Racism, colonialism and exceptionalism	67
3.5	The Kaiser’s genocide	67
3.6	The racism of Cecil Rhodes	67
3.7	Our older brothers can help us today	68
3.8	<i>Imperialism, A Study</i> , by John A, Hobson	70

4	RESOURCE WARS	73
4.1	Adam Smith's invisible hand is at our throats	73
4.2	Our greed-based economic system today	78
4.3	Human motivations were not always so selfish	82
4.4	Neocolonialism	82
4.5	The resource curse	82
4.6	Confessions of an economic hit-man	83
4.7	Debt slavery	85
4.8	Blood for oil	85
4.9	Excessive inequality maintained by military force	91
4.10	Oxfam's report on inequality	91
4.11	Persistent effects of colonialism	92
4.12	Historical conflicts related to water	95
4.13	Conflicts over water in the Middle East	100
4.14	Concluding remarks	102
5	ECOLOGY AND THE VIETNAM WAR	115
5.1	McNamara's Evil Lives On	115
5.2	The Pentagon Papers	117
5.3	Effects of Agent Orange	121
5.4	Bombing of Cambodia and Laos	124
6	THE THREATS AND COSTS OF WAR	131
6.1	The training of soldiers	131
6.2	Killing civilians	132
6.3	The direct and indirect costs of war	140
6.4	Medical and psychological consequences; loss of life	141
6.5	Effects of war on children	142
6.6	Refugees	142
6.7	Damage to infrastructure	143
6.8	Ecological damage	143
6.9	Links between poverty and war	144
6.10	The threat of nuclear war	146
6.11	Atoms for peace?	152
6.12	Cancer threat from radioactive leaks at Hanford	163
6.13	An accident waiting to happen	165
6.14	Flaws in the concept of nuclear deterrence	169
6.15	Nuclear weapons are criminal! Every war is a crime!	176
7	THE ARMS RACE	185
7.1	The arms race prior to World War 1	185
7.2	Krupp, Thyssen and Germany's steel industry	186
7.3	Colonialism and the outbreak of the First World War	187

7.4	Prescott Bush and Hitler	188
7.5	Fritz Thyssen supports Hitler's rise to power	189
7.6	Eisenhower's farewell address	196
7.7	The nuclear arms race	198
7.8	Global famine produced by nuclear war	203
7.9	Military-industrial complexes today	205
7.10	A culture of violence	213
8	LIVES IN THE PEACE MOVEMENT	225
8.1	Count Leo Tolstoy	225
8.2	Mahatma Gandhi	229
8.3	Martin Luther King, Jr.	234
8.4	Wilfred Owen	245
8.5	Siegfried Sassoon	248
8.6	Edna St. Vincent Millay	251
8.7	Bertrand Russell	258
8.8	Albert Einstein	265
8.9	Joseph Rotblat	274
8.10	Daisaku Ikeda and SGI	282
8.11	Book review: "Hiroshima, August 6, 1945, a Silence Broken"	287
8.12	Book review: Aurelio Pecci and Daisaku Ikeda, "Before It's Too Late"	293
8.13	SGI Denmark	295
8.14	Full List of Published Dialogues of Daisaku Ikeda	300
8.15	Mairead Corrigan Maguire	306
8.16	Peace education	312
8.17	A few outstanding voices	329
8.18	The Eqbal Ahmed Centre For Public Education	340
8.19	The Danish Peace Academy	344
9	THE "WAR AGAINST TERROR"	349
9.1	Perpetual war	349
9.2	Are we being driven like cattle?	350
9.3	Media exaggeration of attacks in Paris	356
9.4	Driven towards war by fake threats	357
9.5	The role of the media	358
9.6	Television as a part of our educational system	359
9.7	The mass media have failed us	359
9.8	Alternative media	360
10	A HISTORY OF INTERNATIONAL LAW	363
10.1	What is law?	363
10.2	Magna Carta, 1215	364
10.3	The English Bill of Rights, 1689	366

10.4	The United States Constitution and Bill of Rights, 1789	366
10.5	Kellogg-Briand Pact, 1928	369
10.6	United Nations Charter, 1945	370
10.7	International Court of Justice, 1946	372
10.8	Nuremberg Principles, 1947	373
10.9	The Universal Declaration of Human Rights, 1948	374
10.10	Geneva Conventions, 1949	377
10.11	Nuclear Non-Proliferation Treaty, 1968	378
10.12	Biological Weapons Convention, 1972	379
10.13	Chemical Weapons Convention, 1997	380
10.14	Mine Ban Treaty, 1999	380
10.15	International Criminal Court, 2002	381
10.16	Arms Trade Treaty, 2013	381
10.17	Racism, Colonialism and Exceptionalism	382
10.18	The Oslo Principles on Climate Change Obligation, 2015	382
10.19	Treaty on the Prohibition of Nuclear Weapons, 2017	384
10.20	Hope for the future, and responsibility for the future	384
11	THE UNITED NATIONS CHARTER	387
11.1	The San Francisco Conference	387
11.2	Article 1	389
11.3	Article 2	389
11.4	Against the institution of war	390
11.5	Reforming the UN Charter	398
12	FEDERALISM AND GLOBAL GOVERNANCE	413
12.1	A personal note	413
12.2	Strengthening the United Nations	417
12.3	The Success of Federations	422
12.4	Obstacles to a World Federation	426
12.5	Governments of large nations	427

Chapter 1

THE UKRAINE WAR

1.1 The threat of nuclear war

After the invasion of Ukraine, Vladimir Putin put Russia's nuclear forces on high alert, thus threatening the world with an all-destroying nuclear war. The threat brought back memories of the Cuban Missile Crisis, when the world was balanced on the edge of a suicidal and genocidal nuclear war. We are once again reminded of the urgent need for the world to rid itself of nuclear weapons.

Looking at modern history we can remember a number of times when the world came extremely close to nuclear war, The Cuban Missile Crisis is one example, but there are a number of others. We cannot continue to be lucky forever. Just as the politicians and generals who started World War I had no imaginative idea of what it would be like, our present day leaders seem not to realize the catastrophic nature of nuclear war. Because of the nuclear winter effect and because of the long-lasting effects of radioactivity, our civilization and much of the biosphere would not survive such a war. In the present crisis over Ukraine, both the United States and Russia possess more than enough nuclear weapons to destroy the world completely.

As citizens we must prevent our politicians from pursuing this insane brinksmanship.

1.2 Putin's criminal invasion of Ukraine

Vladimir Putin's invasion of Ukraine was a criminal act, a breach of international law, which cannot in any way be justified.

1.3 The invasion cannot be called unprovoked

Nevertheless, the invasion of Ukraine cannot be called unprovoked. Below we will discuss ways in which the United States and its allies provoked the conflict.

1.4 Russia's understandable fears

Russia fears the eastward expansion of NATO

To understand how Russians feel about having western weapons and troops poured into a position on their nation's borders, we should imagine how the United States would react if large numbers of Russian weapons and troops were stationed in Mexico or Canada.

In 1991, after the breakup of the Soviet Union, George H.W. Bush and his Secretary of State, James Baker, promised Mikhail Gorbachev that if he agreed to the unification of Germany, NATO would not expand eastward, toward Russia, "not one inch." The promise was broken almost immediately by Bill Clinton, who helped to bring the Czech Republic, Hungary and Poland into NATO. Russians saw this not only as a betrayal, but also as an act of aggression.

The Monroe Doctrine

There is no document more fundamental to the foreign policy of the United States than the Monroe Doctrine. It states that interference in the Western Hemisphere by European powers would be interpreted as an attack on the United States, and would be opposed by the United States. The Monroe Doctrine has been used to justify U.S. interventions in Central America and in the Caribbean. Understandably, the United States wishes to have its backyard secure. Why should Russia not have the same wish?

Russia has been invaded many times

Although it happened a long time ago, Russians vividly remember Napoleon's invasion, when Moscow was burned to the ground, and his troops only defeated after immense struggle and sacrifice,

The German invasion of Russia during World War I caused the government of the Czar to fall. It was replaced by a Communist government, which the U.S., the U.K., Japan and Italy tried to overthrow by a counter-revolutionary invasion of Russia.

The World War II German invasion

The German Invasion of Russia during World War II caused 27,000,000 Russian deaths. This terrible ordeal is etched onto the consciousness of all Russians. The fragile infrastructure of Russia was also destroyed by the German invasion.

The U.S. should stop threatening Russia

Because Russia's fears are legitimate, and based on historical suffering, the U.S, and it allies should stop threatening Russia. Nuclear missiles should be removed from positions near to the Russian border, and the eastward expansion of NATO should be halted.



Figure 1.1: An elderly lady walks past a blockaded street in Ukraine.



Figure 1.2: A 15-year-old girl in a children's hospital after being severely wounded.

Suggestions for further reading

1. Wood, Elizabeth A.; Pomeranz, William E.; Merry, E. Wayne; Trudolyubov, Maxim (15 December 2015). *Roots of Russia's War in Ukraine*. Columbia University Press].
2. D'Anieri, Paul (31 October 2019). *Ukraine and Russia: From Civilized Divorce to Uncivil War*. Cambridge University Press.
3. Menon, Rajan; Rumer, Eugene B. (6 February 2015). *Conflict in Ukraine: The Unwinding of the Post-Cold War Order*. MIT Press.
4. Bowen, Andrew (2017). *Coercive Diplomacy and the Donbas: Explaining Russian Strategy in Eastern Ukraine*. *Journal of Strategic Studies*. 42 (3-4): 312-343.
5. Bremmer, Ian (1994). *The Politics of Ethnicity: Russians in the New Ukraine*. *Europe-Asia Studies*. 46 (2): 261-283.
6. Hagendoorn, A.; Linssen, H.; Tumanov, S. V. (2001). *Intergroup Relations in States of the former Soviet Union: The Perception of Russians*. New York: Taylor & Francis.
7. Legvold, Robert (2013). *Russian Foreign Policy in the Twenty-first Century and the Shadow of the Past*. New York: Columbia University Press.

Chapter 2

TRIBALISM AND NATIONALISM

2.1 Ethology

In the long run, because of the terrible weapons that have already been produced through the misuse of science, and because of the even more terrible weapons that are likely to be invented in the future, the only way in which we can ensure the survival of civilization is to abolish the institution of war. But is this possible? Or are the emotions that make war possible so much a part of human nature that we cannot stop humans from fighting any more than we can stop cats and dogs from fighting? Can biological science throw any light on the problem of why our supposedly rational species seems intent on choosing war, pain and death instead of peace, happiness and life? To answer this question, we need to turn to the science of ethology - the study of inherited emotional tendencies and behavior patterns in animals and humans.

In *The Origin of Species*, Charles Darwin devoted a chapter to the evolution of instincts, and he later published a separate book on *The Expression of the Emotions in Man and Animals*. Because of these pioneering studies, Darwin is considered to be the founder of ethology.

Behind Darwin's work in this field is the observation that instinctive behavior patterns are just as reliably inherited as morphological characteristics. Darwin was also impressed by the fact that within a given species, behavior patterns have some degree of uniformity, and the fact that the different species within a family are related by similarities of instinctive behavior, just as they are related by similarities of bodily form. For example, certain elements of cat-like behavior can be found among all members of the cat family; and certain elements of dog-like or wolf-like behavior can be found among all members of the dog family. On the other hand, there are small variations in instinct among the members of a given species. For example, not all domestic dogs behave in the same way.

"Let us look at the familiar case of breeds of dogs", Darwin wrote in *The Origin of Species*, "It cannot be doubted that young pointers will sometimes point and even back other dogs the very first time they are taken out; retrieving is certainly in some degree inherited by retrievers; and a tendency to run round, instead of at, a flock of sheep by

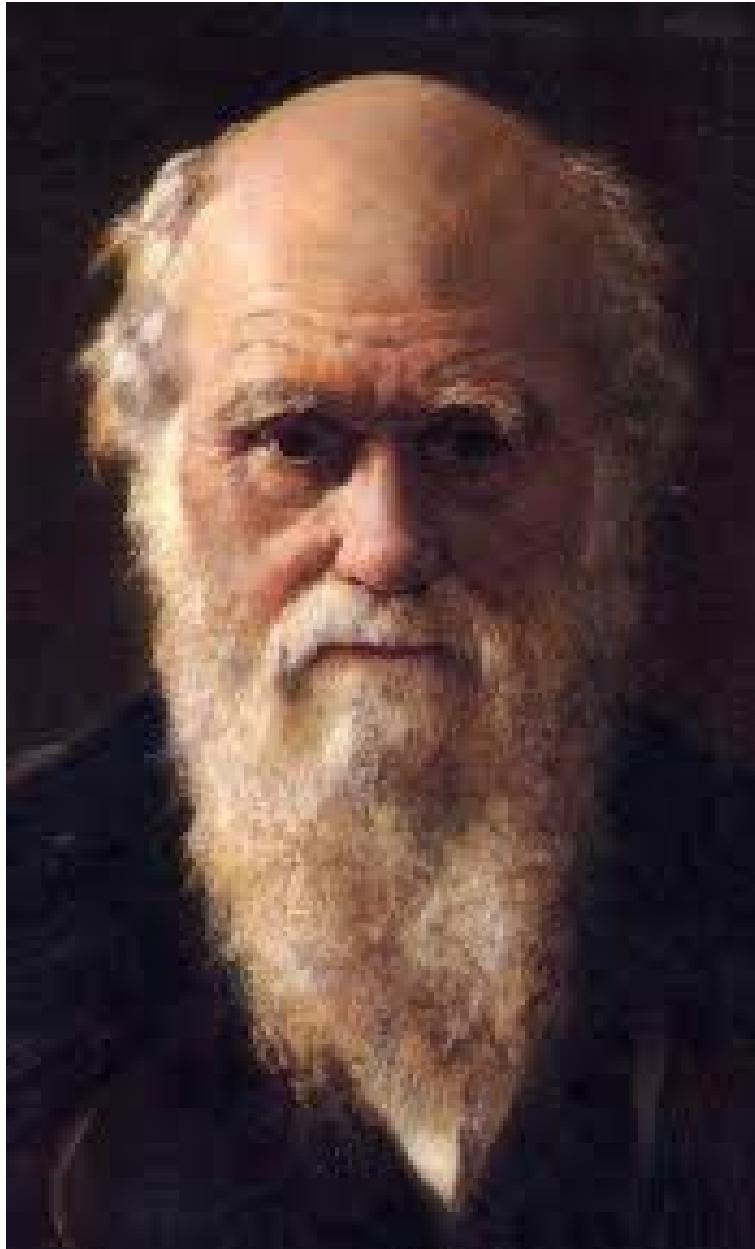


Figure 2.1: Because of Charles Darwin's book "The Expression of Emotions in Man and Animals", he is considered to be the founder of the field of Ethology, the study of inherited behavior patterns.

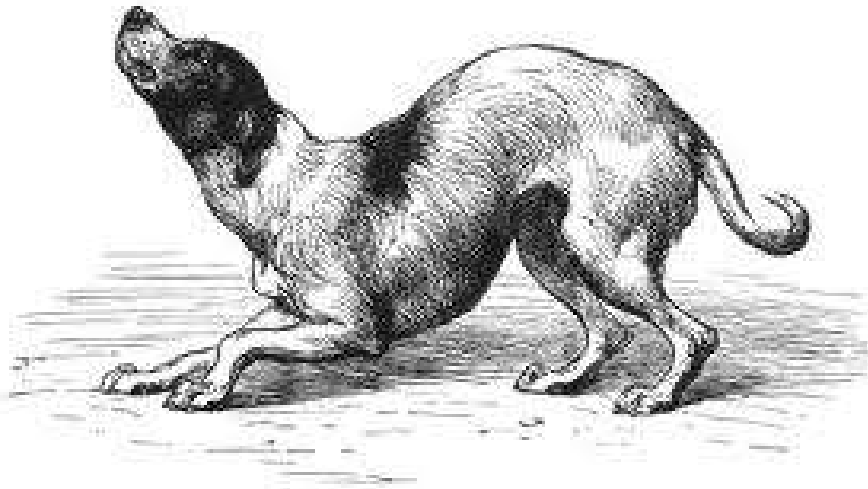


Figure 2.2: A dog expressing affection towards its master.

shepherd dogs. I cannot see that these actions, performed without experience by the young, and in nearly the same manner by each individual, and without the end being known - for the young pointer can no more know that he points to aid his master than the white butterfly knows why she lays her eggs on the leaf of the cabbage - I cannot see that these actions differ essentially from true instincts..."

"How strongly these domestic instincts habits and dispositions are inherited, and how curiously they become mingled, is well shown when different breeds of dogs are crossed. Thus it is known that a cross with a bulldog has affected for many generations the courage and obstinacy of greyhounds; and a cross with a greyhound has given to a whole family of shepherd dogs a tendency to hunt hares..."

Darwin believed that in nature, desirable variations of instinct are propagated by natural selection, just as in the domestication of animals, favorable variations of instinct are selected and propagated by kennelmen and stock breeders. In this way, according to Darwin, complex and highly developed instincts, such as the comb-making instinct of honey-bees, have evolved by natural selection from simpler instincts, such as the instinct by which bumble bees use their old cocoons to hold honey and sometimes add a short wax tube.

In the introduction of his book, *The Expression of the Emotions in Man and Animals*, Darwin says "I thought it very important to ascertain whether the same expressions and gestures prevail, as has often been asserted without much evidence, with all the races of mankind, especially with those who have associated but little with Europeans. Whenever the same movements of the features or body express the same emotions in several distinct races of man, we may infer with much probability, that such expressions are true ones, - that is, are innate or instinctive."

To gather evidence on this point, Darwin sent a printed questionnaire on the expression

of human emotions and sent it to missionaries and colonial administrators in many parts of the world. There were 16 questions to be answered:

1. *Is astonishment expressed by the eyes and mouth being opened wide, and by the eyebrows being raised?*
2. *Does shame excite a blush when the colour of the skin allows it to be visible? and especially how low down on the body does the blush extend?*
3. *When a man is indignant or defiant does he frown, hold his body and head erect, square his shoulders and clench his fists?*
4. *When considering deeply on any subject, or trying to understand any puzzle, does he frown, or wrinkle the skin beneath the lower eyelids?*

and so on.

Darwin received 36 replies to his questionnaire, many coming from people who were in contact with extremely distinct and isolated groups of humans. The results convinced him that our emotions and the means by which they are expressed are to a very large extent innate, rather than culturally determined, since the answers to his questionnaire were so uniform and so independent of both culture and race. In preparation for his book, he also closely observed the emotions and their expression in very young babies and children, hoping to see inherited characteristics in subjects too young to have been greatly influenced by culture. Darwin's observations convinced him that in humans, just as in other mammals, the emotions and their expression are to a very large extent inherited universal characteristics of the species.

The study of inherited behavior patterns in animals (and humans) was continued in the 20th century by such researchers as Karl von Frisch (1886-1982), Nikolaas Tinbergen (1907-1988), and Konrad Lorenz (1903-1989), three scientists who shared a Nobel Prize in Medicine and Physiology in 1973.

Karl von Frisch, the first of the three ethologists who shared the 1973 prize, is famous for his studies of the waggle-dance of honeybees. Bees guide each other to sources of food by a genetically programmed signaling method - the famous waggle dance, deciphered in 1945 by von Frisch. When a worker bee has found a promising food source, she returns to the hive and performs a complex dance, the pattern of which indicates both the direction and distance of the food. The dancer moves repeatedly in a pattern resembling the Greek letter Θ . If the food-discoverer is able to perform her dance on a horizontal flat surface in view of the sun, the line in the center of the pattern points in the direction of the food. However, if the dance is performed in the interior of the hive on a vertical surface, gravity takes the place of the sun, and the angle between the central line and the vertical represents the angle between the food source and the sun.

The central part of the dance is, in a way, a re-enactment of the excited forager's flight to the food. As she traverses the central portion of the pattern, she buzzes her wings and waggles her abdomen rapidly, the number of waggles indicating the approximate distance

to the food ¹. After this central portion of the dance, she turns alternately to the left or to the right, following one or the other of the semicircles, and repeats the performance. Studies of the accuracy with which her hive-mates follow these instructions show that the waggle dance is able to convey approximately 7 bits of information - 3 bits concerning distance and 4 bits concerning direction. After making his initial discovery of the meaning of the dance, von Frisch studied the waggle dance in many species of bees. He was able to distinguish species-specific dialects, and to establish a plausible explanation for the evolution of the dance.

Among the achievements for which Tinbergen is famous are his classic studies of instinct in herring gulls. He noticed that the newly-hatched chick of a herring gull pecks at the beak of its parent, and this signal causes the parent gull to regurgitate food into the gaping beak of the chick. Tinbergen wondered what signal causes the chick to initiate this response by pecking at the beak of the parent gull. Therefore he constructed a series of models of the parent in which certain features of the adult gull were realistically represented while other features were crudely represented or left out entirely. He found by trial and error that the essential signal to which the chick responds is the red spot on the tip of its parent's beak. Models which lacked the red spot produced almost no response from the young chick, although in other respects they were realistic models; and the red spot on an otherwise crude model would make the chick peck with great regularity.

In other experiments, Tinbergen explored the response of newly-hatched chicks of the common domestic hen to models representing a hawk. Since the chicks were able to recognize a hawk immediately after hatching, he knew that the response must be genetically programmed. Just as he had done in his experiments with herring gulls, Tinbergen experimented with various models, trying to determine the crucial characteristic that was recognized by the chicks, causing them to run for cover. He discovered that a crude model in the shape of the letter T invariable caused the response if pulled across the sky with the wings first and tail last. (Pulled backwards, the T shape caused no response.)

In the case of a newly-hatched herring gull chick pecking at the red spot on the beak of its parent, the program in the chick's brain must be entirely genetically determined, without any environmental component at all. Learning cannot play a part in this behavioral pattern, since the pattern is present in the young chick from the very moment when it breaks out of the egg. On the other hand (Tinbergen pointed out) many behavioral patterns in animals and in man have both an hereditary component and an environmental component. Learning is often very important, but learning seems to be built on a foundation of genetic predisposition.

To illustrate this point, Tinbergen called attention to the case of sheep-dogs, whose remote ancestors were wolves. These dogs, Tinbergen tells us, can easily be trained to drive a flock of sheep towards the shepherd. However, it is difficult to train them to drive the sheep away from their master. Tinbergen explained this by saying that the sheep-dogs regard the shepherd as their "pack leader"; and since driving the prey towards the pack

¹The number of waggles is largest when the source of food is near, and for extremely nearby food, the bees use another dance, the "round dance".



Figure 2.3: The red spot on the beak of the parent gull proved to be the crucial signal needed to activate the instinctive response of the chick.



Figure 2.4: Nikolaas Tinbergen (1907-1988) on the left, with Konrad Lorenz (1903-1989). Together with Karl von Frisch (1886-1982) they shared the 1973 Nobel Prize in Physiology and Medicine for their pioneering work in Ethology.



Figure 2.5: **Konrad Lorenz with geese who consider him to be their mother.**

leader is part of the hunting instinct of wolves, it is easy to teach the dogs this maneuver. However, driving the prey away from the pack leader would not make sense for wolves hunting in a pack; it is not part of the instinctive makeup of wolves, nor is it a natural pattern of behavior for their remote descendants, the sheep-dogs.

As a further example of the fact that learning is usually built on a foundation of genetic predisposition, Tinbergen mentions the ease with which human babies learn languages. The language learned is determined by the baby's environment; but the astonishing ease with which a human baby learns to speak and understand implies a large degree of genetic predisposition.

The third of the 1973 prizewinners, Konrad Lorenz, is more controversial, but at the same time very interesting in the context of studies of the causes of war and discussions of how war may be avoided. As a young boy, he was very fond of animals, and his tolerant parents allowed him to build up a large menagerie in their house in Altenberg, Austria. Even as a child, he became an expert on waterfowl behavior, and he discovered the phenomenon of imprinting. He was given a one day old duckling, and found, to his intense joy, that it transferred its following response to his person. As Lorenz discovered, young waterfowl have a short period immediately after being hatched, when they identify as their "mother" whomever they see first. In later life, Lorenz continued his studies of imprinting, and there exists a touching photograph of him, with his white beard, standing waist-deep in a pond, surrounded by an adoring group of goslings who believe him to be

their mother. Lorenz also studied bonding behavior in waterfowl.

It is, however, for his controversial book *On Aggression* that Konrad Lorenz is best known. In this book, Lorenz makes a distinction between intergroup aggression and intragroup aggression. Among animals, he points out, rank-determining fights are seldom fatal. Thus, for example, the fights that determine leadership within a wolf pack end when the loser makes a gesture of submission. By contrast, fights between groups of animals are often fights to the death, examples being wars between ant colonies, or of bees against intruders, or the defense of a rat pack against strange rats.

Many animals, humans included, seem willing to kill or be killed in defense of the communities to which they belong. Lorenz calls this behavioral tendency a “communal defense response”. He points out that the “holy shiver” - the tingling of the spine that humans experience when performing a heroic act in defense of their communities - is related to the prehuman reflex for raising the hair on the back of an animal as it confronts an enemy - a reflex that makes the animal seem larger than it really is.

Konrad Lorenz and his followers have been criticized for introducing a cathartic model of instincts. According to Lorenz, if an instinct is not used, a pressure for its use builds up over a period of time. In the case of human aggression, according to Lorenz, the nervous energy has to be dissipated in some way, either harmlessly through some substitute for aggression, or else through actual fighting. Thus, for example, Lorenz believed that violent team sports help to reduce the actual level of violence in a society. This conclusion has been challenged by the distinguished ethologist Prof. R.A. Hinde and by many others in his field who believe that there is no experimental evidence for the cathartic model of aggression.²

Professor Hinde points out that unused instincts tend to atrophy; and he concludes that violent team sports or violence shown on television tend to raise rather than lower the level of harmful violence in a society. Although the cathartic model of aggression is now widely considered to be incorrect (and on this point I certainly agree with Professor Hinde) it seems probable that the communal defense response discussed by Lorenz will prove to be a correct and useful concept. The communal defense mechanism can be thought of as the aspect of human emotions which makes it natural for soldiers to kill or be killed in defense of their countries. In the era before nuclear weapons made war prohibitively dangerous, such behavior was considered to be the greatest of virtues.

Generations of schoolboys have learned the Latin motto: “*Dulce et decorum est pro patria mori*” - it is both sweet and noble to die for one’s country. Even in today’s world,

²In a 1985 letter to the author, Professor Hinde wrote; “Dear Dr. Avery, I found your pamphlet ‘The World as it is and the World as it could be’ a very inspiring document, and I hope that it will be widely circulated. But just one comment - amongst the suggestions for further reading you include Konrad Lorenz’s ‘On Aggression’. The message that comes from this book is that human aggressiveness is inevitably part of our human nature, and we must seek harmless outlets for it. This rests on a cathartic model of human behavior that is outdated. A more appropriate message is that we must find ways of rearing our children so that their propensity to show aggression is reduced, and provide individuals with environments in which any aggressive propensities are not called forth. I’m sure you would agree with this. I hope that you will forgive this slight reservation about what seems to me to be a totally admirable and important statement. With best wishes, Yours sincerely, Robert A. Hinde.

death in battle in defense of country and religion is still praised by nationalists. However, because of the development of weapons of mass destruction, both nationalism and narrow patriotism have become dangerous anachronisms.

In thinking of violence and war, we must be extremely careful not to confuse the behavioral patterns that lead to wife-beating or bar-room brawls with those that lead to episodes like the trench warfare of the First World War, or to the nuclear bombing of Hiroshima and Nagasaki. The first type of aggression is similar to the rank-determining fights of animals, while the second is more akin to the team-spirit exhibited by a football side. Heroic behavior in defense of one's community has been praised throughout the ages, but the tendency to such behavior has now become a threat to the survival of civilization, since tribalism makes war possible, and war with thermonuclear weapons threatens civilization with catastrophe.

In an essay entitled *The Urge to Self-Destruction*³, Arthur Koestler says:

"Even a cursory glance at history should convince one that individual crimes, committed for selfish motives, play a quite insignificant role in the human tragedy compared with the numbers massacred in unselfish love of one's tribe, nation, dynasty, church or ideology... Wars are not fought for personal gain, but out of loyalty and devotion to king, country or cause..."

"We have seen on the screen the radiant love of the Führer on the faces of the Hitler Youth... They are transfixed with love, like monks in ecstasy on religious paintings. The sound of the nation's anthem, the sight of its proud flag, makes you feel part of a wonderfully loving community. The fanatic is prepared to lay down his life for the object of his worship, as the lover is prepared to die for his idol. He is, alas, also prepared to kill anybody who represents a supposed threat to the idol." The emotion described here by Koestler is the same as the communal defense mechanism ("militant enthusiasm") described in biological terms by Lorenz.

In his book *On Aggression*, Konrad Lorenz gives the following description of the emotions of a hero preparing to risk his life for the sake of the group:

"In reality, militant enthusiasm is a specialized form of communal aggression, clearly distinct from and yet functionally related to the more primitive forms of individual aggression. Every man of normally strong emotions knows, from his own experience, the subjective phenomena that go hand in hand with the response of militant enthusiasm. A shiver runs down the back and, as more exact observation shows, along the outside of both arms. One soars elated, above all the ties of everyday life, one is ready to abandon all for the call of what, in the moment of this specific emotion, seems to be a sacred duty. All obstacles in its path become unimportant; the instinctive inhibitions against hurting or killing one's fellows lose, unfortunately, much of their power. Rational considerations, criticisms, and all reasonable arguments against the behavior dictated by militant enthusiasm are silenced by an amazing reversal of all values, making them appear not only untenable, but base and dishonorable.

³in *The Place of Value in a World of Facts*, A. Tiselius and S. Nielsson editors, Wiley, New York, (1970)

Men may enjoy the feeling of absolute righteousness even while they commit atrocities. Conceptual thought and moral responsibility are at their lowest ebb. As the Ukrainian proverb says: ‘When the banner is unfurled, all reason is in the trumpet’.”

“The subjective experiences just described are correlated with the following objectively demonstrable phenomena. The tone of the striated musculature is raised, the carriage is stiffened, the arms are raised from the sides and slightly rotated inward, so that the elbows point outward. The head is proudly raised, the chin stuck out, and the facial muscles mime the ‘hero face’ familiar from the films. On the back and along the outer surface of the arms, the hair stands on end. This is the objectively observed aspect of the shiver!”

“Anybody who has ever seen the corresponding behavior of the male chimpanzee defending his band or family with self-sacrificing courage will doubt the purely spiritual character of human enthusiasm. The chimp, too, sticks out his chin, stiffens his body, and raises his elbows; his hair stands on end, producing a terrifying magnification of his body contours as seen from the front. The inward rotation of the arms obviously has the purpose of turning the longest-haired side outward to enhance the effect. The whole combination of body attitude and hair-raising constitutes a bluff. This is also seen when a cat humps its back, and is calculated to make the animal appear bigger and more dangerous than it really is. Our shiver, which in German poetry is called a ‘heiliger Schauer’, a ‘holy’ shiver, turns out to be the vestige of a prehuman vegetative response for making a fur bristle which we no longer have. To the humble seeker for biological truth, there cannot be the slightest doubt that human militant enthusiasm evolved out of a communal defense response of our prehuman ancestor.”

Lorenz goes on to say, “An impartial visitor from another planet, looking at man as he is today - in his hand the atom bomb, the product of his intelligence - in his heart the aggression drive, inherited from his anthropoid ancestors, which the same intelligence cannot control - such a visitor would not give mankind much chance of survival.”

There are some semantic difficulties connected with discussions of the parts of human nature that make war possible. In one of the passages quoted above, Konrad Lorenz speaks of “militant enthusiasm”, which he says is both a form of communal aggression and also a communal defense response. In their inspiring recent book *War No More*, Professor Robert Hinde and Sir Joseph Rotblat use the word “duty” in discussing the same human emotional tendencies. I will instead use the word “tribalism”.

I prefer the word “tribalism” because from an evolutionary point of view the human emotions involved in war grew out of the territorial competition between small tribes during the formative period when our ancestors were hunter-gatherers on the grasslands of Africa. Members of tribe-like groups are bound together by strong bonds of altruism and loyalty. Echos of these bonds can be seen in present-day family groups, in team sports, in the fellowship of religious congregations, and in the bonds that link soldiers to their army comrades and to their nation.

Warfare involves not only a high degree of aggression, but also an extremely high degree of altruism. Soldiers kill, but they also sacrifice their own lives. Thus patriotism and duty are as essential to war as the willingness to kill. As Arthur Koestler points out, “Wars are not fought for personal gain, but out of loyalty and devotion to king, country or cause...”

Tribalism involves passionate attachment to one's own group, self-sacrifice for the sake of the group, willingness both to die and to kill if necessary to defend the group from its enemies, and belief that in case of a conflict, one's own group is always in the right.

2.2 Population genetics

If we examine altruism and aggression in humans, we notice that members of our species exhibit great altruism towards their own children. Kindness towards close relatives is also characteristic of human behavior, and the closer the biological relationship is between two humans, the greater is the altruism they tend to show towards each other. This profile of altruism is easy to explain on the basis of Darwinian natural selection since two closely related individuals share many genes and, if they cooperate, the genes will be more effectively propagated.

To explain from an evolutionary point of view the communal defense mechanism discussed by Lorenz - the willingness of humans to kill and be killed in defense of their communities - we have only to imagine that our ancestors lived in small tribes and that marriage was likely to take place within a tribe rather than across tribal boundaries. Under these circumstances, each tribe would tend to consist of genetically similar individuals. The tribe itself, rather than the individual, would be the unit on which the evolutionary forces of natural selection would act. The idea of group selection in evolution was proposed in the 1930's by J.B.S. Haldane and R.A. Fischer, and more recently it has been discussed by W.D. Hamilton and E.O. Wilson.

According to the group selection model, a tribe whose members showed altruism towards each other would be more likely to survive than a tribe whose members cooperated less effectively. Since several tribes might be in competition for the same territory, intertribal aggression might, under some circumstances, increase the chances for survival of one's own tribe. Thus, on the basis of the group selection model, one would expect humans to be kind and cooperative towards members of their own group, but at the same time to sometimes exhibit aggression towards members of other groups, especially in conflicts over territory. One would also expect intergroup conflicts to be most severe in cases where the boundaries between groups are sharpest - where marriage is forbidden across the boundaries.



Figure 2.6: **Sir Ronald Aylmer Fischer (1890-1962).** Together with J.B.S Haldane he pioneered the theory of population genetics. Recent contributions to this theory have been made by W.D. Hamilton and E.O. Wilson.

2.3 Formation of group identity

Although humans originally lived in small, genetically homogeneous tribes, the social and political groups of the modern world are much larger, and are often multiracial and multiethnic.

There are a number of large countries that are remarkable for their diversity, for example Brazil, Argentina and the United States. Nevertheless it has been possible to establish social cohesion and group identity within each of these enormous nations. India and China too, are mosaics of diverse peoples, but nevertheless, they function as coherent societies. Thus we see that group identity is a social construction, in which artificial “tribal markings” define the boundaries of the group. These tribal markings will be discussed in more detail below.

One gains hope for the future by observing how it has been possible to produce both internal peace and social cohesion over very large areas of the globe - areas that contain extremely diverse populations. The difference between making large, ethnically diverse countries function as coherent sociopolitical units and making the entire world function as a unit is not very great.

Since group identity is a social construction, it is not an impossible goal to think of enlarging the already-large groups of the modern world to include all of humanity.

2.4 Religion and ethnic identity

For the hominids that formed a bridge between present-day humans and the common ancestor of ourselves and the anthropoid apes, culture included not only rudimentary language, but also skills such as methods of tool-making and weapon making.

An acceleration of human cultural development seems to have begun approximately 70,000 years ago. The first art objects date from that period, as do migrations that ultimately took modern man across the Bering Strait to the western hemisphere. A land bridge extending from Siberia to Alaska is thought to have been formed approximately 70,000 years ago, disappearing again roughly 10,000 years before the present. Cultural and genetic studies indicate that migrations from Asia to North America took place during this period. Shamanism,⁴ which is found both in Asia and the new world, as well as among the Sami (Lapps) of northern Scandinavia, is an example of the cultural links between the hunting societies of these regions.

Before the acceleration of human cultural development just mentioned, genetic change and cultural change went hand in hand, but during the last 70,000 years, the constantly accelerating rate of information-accumulation and cultural evolution has increasingly out-distanced the rate of genetic change in humans. Genetically we are almost identical with

⁴A shaman is a special member of a hunting society who, while in a trance, is thought to be able pass between the upper world, the present world, and the lower world, to cure illnesses, and to insure the success of a hunt.

our hunter-gatherer ancestors of 70,000 years ago, but cultural evolution has changed our way of life beyond recognition.

Humans are capable of cultural evolution because it is so easy to overwrite and modify our instinctive behavior patterns with learned behavior. Within the animal kingdom, humans are undoubtedly the champions in this respect. No other species is so good at learning as we are. During the early stages of cultural evolution, the tendency of humans to be religious may have facilitated the overwriting of instinctive behavior with the culture of the tribe. Since religions, like languages, are closely associated with particular cultures, they serve as marks of ethnic identity.

2.5 Tribal markings; ethnicity; pseudospeciation

In biology, a species is defined to be a group of mutually fertile organisms. Thus all humans form a single species, since mixed marriages between all known races will produce children, and subsequent generations in mixed marriages are also fertile. However, although there is never a biological barrier to marriages across ethnic and racial boundaries, there are often very severe cultural barriers.

Irenäus Eibl-Eibesfeldt, a student of Konrad Lorenz, introduced the word *pseudospeciation* to denote cases where cultural barriers between two groups of humans are so strongly marked that marriages across the boundary are difficult and infrequent. In such cases, he pointed out, the two groups function as though they were separate species, although from a biological standpoint this is nonsense. When two such groups are competing for the same land, the same water, the same resources, and the same jobs, the conflicts between them can become very bitter indeed. Each group regards the other as being “not truly human”.

In his book *The Biology of War and Peace*, Eibl-Eibesfeldt discusses the “tribal markings” used by groups of humans to underline their own identity and to clearly mark the boundary between themselves and other groups. One of the illustrations in the book shows the marks left by ritual scarification on the faces of the members of certain African tribes. These scars would be hard to counterfeit, and they help to establish and strengthen tribal identity. Seeing a photograph of the marks left by ritual scarification on the faces of African tribesmen, it is impossible not to be reminded of the dueling scars that Prussian army officers once used to distinguish their caste from outsiders.

Surveying the human scene, one can find endless examples of signs that mark the bearer as a member of a particular group - signs that can be thought of as “tribal markings”: tattoos; piercing; bones through the nose or ears; elongated necks or ears; filed teeth; Chinese binding of feet; circumcision, both male and female; unique hair styles; decorations of the tongue, nose, or naval; peculiarities of dress, fashions, veils, chadors, and headdresses; caste markings in India; use or nonuse of perfumes; codes of honor and value systems; traditions of hospitality and manners; peculiarities of diet (certain foods forbidden, others preferred); giving traditional names to children; knowledge of dances and songs; knowledge of recipes; knowledge of common stories, literature, myths, poetry or common history;



Figure 2.7: Scars help to establish tribal identity

festivals, ceremonies, and rituals; burial customs, treatment of the dead and ancestor worship; methods of building and decorating homes; games and sports peculiar to a culture; relationship to animals, knowledge of horses and ability to ride; nonrational systems of belief. Even a baseball hat worn backwards or the professed ability to enjoy atonal music can mark a person as a member of a special “tribe”. Undoubtedly there many people in New York who would never think of marrying someone who could not appreciate the the paintings of Jasper Johns, and many in London who would consider anyone had not read all the books of Virginia Wolfe to be entirely outside the bounds of civilization.

By far the most important mark of ethnic identity is language, and within a particular language, dialect and accent. If the only purpose of language were communication, it would be logical for the people of a small country like Denmark to stop speaking Danish and go over to a more universally-understood international language such as English. However, language has another function in addition to communication: It is also a mark of identity. It establishes the boundary of the group.

Within a particular language, dialects and accents mark the boundaries of subgroups. For example, in England, great social significance is attached to accents and diction, a tendency that George Bernard Shaw satirized in his play, *Pygmalion*, which later gained greater fame as the musical comedy, *My Fair Lady*. This being the case, we can ask why all citizens of England do not follow the example of Eliza Doolittle in Shaw’s play, and improve their social positions by acquiring Oxford accents. However, to do so would be to run the risk of being laughed at by one’s peers and regarded as a traitor to one’s own local community and friends. School children everywhere can be very cruel to any child who does not fit into the local pattern. At Eton, an Oxford accent is compulsory; but in a Yorkshire school, a child with an Oxford accent would suffer for it.



Figure 2.8: An example of the dueling scars that Prussian army officers once used to distinguish their caste from outsiders.

Next after language, the most important “tribal marking” is religion. As mentioned above, it seems probable that in the early history of our hunter-gatherer ancestors, religion evolved as a mechanism for perpetuating tribal traditions and culture. Like language, and like the innate facial expressions studied by Darwin, religion is a universal characteristic of all human societies. All known races and cultures practice some sort of religion. Thus a tendency to be religious seems to be built into human nature, or at any rate, the needs that religion satisfies seem to be a part of our inherited makeup. Otherwise, religion would not be so universal as it is.

Religion is often strongly associated with ethnicity and nationalism, that is to say, it is associated with the demarcation of a particular group of people by its culture or race. For example, the Jewish religion is associated with Zionism and with Jewish nationalism. Similarly Islam is strongly associated with Arab nationalism. Christianity too has played an important role in many aggressive wars, for example in the Crusades, in the European conquest of the New World, in European colonial conquests in Africa and Asia, and in the wars between Catholics and Protestants within Europe. We shall see in a later chapter how the originators of the German nationalist movement (the precursors of the Nazis), used quasi-religious psychological methods.

Human history seems to be saturated with blood. It would be impossible to enumerate the conflicts with which the story of humankind is stained. Many of the atrocities of history have involved what Irenäus Eibl-Eibesfeldt called “pseudospeciation”, that is to say, they were committed in conflicts involving groups between which sharply marked cultural barriers have made intermarriage difficult and infrequent. Examples include the present conflict between Israelis and Palestinians; “racial cleansing” in Kosovo; the devastating wars between Catholics and Protestants in Europe; the Lebanese civil war; genocide committed against Jews and Gypsies during World War II; recent genocide in Rwanda; current intertribal massacres in the Ituri Province of Congo; use of poison gas against Kurdish civilians by Saddam Hussein’s regime in Iraq; the massacre of Armenians by Turks; massacres of Hindus by Muslims and of Muslims by Hindus in post-independence India; massacres of Native Americans by white conquerors and settlers in all parts of the New World; and massacres committed during the Crusades. The list seems almost endless.

Religion often contributes to conflicts by sharpening the boundaries between ethnic groups and by making marriage across those boundaries difficult and infrequent. However, this negative role is balanced by a positive one, whenever religion is the source of ethical principles, especially the principle of universal human brotherhood.

The religious leaders of today’s world have the opportunity to contribute importantly to the solution of the problem of war. They have the opportunity to powerfully support the concept of universal human brotherhood, to build bridges between religious groups, to make intermarriage across ethnic boundaries easier, and to soften the distinctions between communities. If they fail to do this, they will have failed humankind at a time of crisis.

2.6 The mystery of self-sacrifice in war

Warfare involves not only a high degree of aggression, but also an extremely high degree of altruism. Soldiers kill, but they also sacrifice their own lives. Thus patriotism and duty are as essential to war as the willingness to kill.

Tribalism involves passionate attachment to one's own group, self-sacrifice for the sake of the group, willingness both to die and to kill if necessary to defend the group from its enemies, and belief that in case of a conflict, one's own group is always in the right. Unfortunately these emotions make war possible; and today a Third World War might lead to the destruction of civilization.

At first sight, the willingness of humans to die defending their social groups seems hard to explain from the standpoint of Darwinian natural selection. After the heroic death of such a human, he or she will be unable to produce more children, or to care for those already born. Therefore one might at first suppose that natural selection would work strongly to eliminate the trait of self-sacrifice from human nature. However, the theory of population genetics and group selection can explain both the willingness of humans to sacrifice themselves for their own group, and also the terrible aggression that they sometimes exhibit towards competing groups. It can explain both intra-group altruism and inter-group aggression.

2.7 Fischer, Haldane, Hamilton and Wilson

The idea of group selection in evolution was proposed in the 1930's by J.B.S. Haldane and R.A. Fischer, and more recently it has been discussed by W.D. Hamilton and E.O. Wilson.

If we examine altruism and aggression in humans, we notice that members of our species exhibit great altruism towards their own children. Kindness towards close relatives is also characteristic of human behavior, and the closer the biological relationship is between two humans, the greater is the altruism they tend to show towards each other. This profile of altruism is easy to explain on the basis of Darwinian natural selection since two closely related individuals share many genes and, if they cooperate, the genes will be more effectively propagated.

To explain from an evolutionary point of view the communal defense mechanism - the willingness of humans to kill and be killed in defense of their communities - we have only to imagine that our ancestors lived in small tribes and that marriage was likely to take place within a tribe rather than across tribal boundaries. Under these circumstances, each tribe would tend to consist of genetically similar individuals. The tribe itself, rather than the individual, would be the unit on which the evolutionary forces of natural selection would act.

According to the group selection model, a tribe whose members showed altruism towards each other would be more likely to survive than a tribe whose members cooperated less effectively. Since several tribes might be in competition for the same territory, suc-

cessful aggression against a neighboring group could increase the chances for survival of one's own tribe. Thus, on the basis of the group selection model, one would expect humans to be kind and cooperative towards members of their own group, but at the same time to sometimes exhibit aggression towards members of other groups, especially in conflicts over territory. One would also expect intergroup conflicts to be most severe in cases where the boundaries between groups are sharpest - where marriage is forbidden across the boundaries.

2.8 Cooperation in groups of animals and human groups

The social behavior of groups of animals, flocks of birds and communities of social insects involves cooperation as well as rudimentary forms of language. Various forms of language, including chemical signals, postures and vocal signals, are important tools for orchestrating cooperative behavior.

The highly developed language of humans made possible an entirely new form of evolution. In cultural evolution (as opposed to genetic evolution), information is passed between generations not in the form of a genetic code, but in the form of linguistic symbols. With the invention of writing, and later the invention of printing, the speed of human cultural evolution greatly increased. Cooperation is central to this new form of evolution. Cultural advances can be shared by all humans.

2.9 Trading in primitive societies

Although primitive societies engaged in frequent wars, they also cooperated through trade. Peter Watson, an English historian of ideas, believes that long-distance trade took place as early as 150,000 before the present. There is evidence that extensive trade in obsidian and flint took place during the stone age. Evidence for wide ranging prehistoric obsidian and flint trading networks has been found in North America. Ancient burial sites in Southeast Asia show that there too, prehistoric trading took place across very large distances. Analysis of jade jewelry from the Philippines, Thailand, Malaysia and Vietnam shows that the jade originated in Taiwan.

The invention of writing was prompted by the necessities of trade. In prehistoric Mesopotamia, clay tokens marked with simple symbols were used for accounting as early as 8,000 BC. Often these tokens were kept in clay jars, and symbols on the outside of the jars indicated the contents. About 3,500 BC, the use of such tokens and markings led to the development of pictographic writing in Mesopotamia, and this was soon followed by the cuneiform script, still using soft clay as a medium. The clay tablets were later dried and baked to ensure permanency. The invention of writing led to a great acceleration of human cultural evolution. Since ideas could now be exchanged and preserved with great ease through writing, new advances in technique could be shared by an ever larger cooperating community of humans. Our species became more and more successful as its genius

for cooperation developed.

Early religions tended to be centered on particular tribes, and the ethics associated with them were usually tribal in nature. However, the more cosmopolitan societies that began to form after the Neolithic agricultural revolution required a more universal code of ethics. It is interesting to notice that many of the great ethical teachers of human history, for example Moses, Socrates, Plato, Aristotle, Lao-Tzu, Confucius, Buddha, and Jesus, lived at the time when the change to larger social units was taking place. Tribalism was no longer appropriate. A wider ethic was needed.

Today the size of the social unit is again being enlarged, this time enlarged to include the entire world. Narrow loyalties have become inappropriate and there is an urgent need for a new ethic - a global ethic. Loyalty to one's nation needs to be supplemented by a higher loyalty to humanity as a whole.

2.10 Interdependence in modern human society

The enormous success of humans as a species is due to their genius for cooperation. The success of humans is a success of cultural evolution, a new form of evolution in which information is passed between generations, not in the form of DNA sequences but in the form of speech, writing, printing and finally electronic signals. Cultural evolution is built on cooperation, and has reached great heights of success as the cooperating community has become larger and larger, ultimately including the entire world.

Without large-scale cooperation, modern science would never have evolved. It developed as a consequence of the invention of printing, which allowed painfully gained detailed knowledge to be widely shared. Science derives its great power from concentration. Attention and resources are brought to bear on a limited problem until all aspects of it are understood. It would make no sense to proceed in this way if knowledge were not permanent, and if the results of scientific research were not widely shared. But today the printed word and the electronic word spread the results of research freely to the entire world. The whole human community is the repository of shared knowledge.

The achievements of modern society are achievements of cooperation. We can fly, but no one builds an airplane alone. We can cure diseases, but only through the cooperative efforts of researchers, doctors and medicinal firms. We can photograph and understand distant galaxies, but the ability to do so is built on the efforts of many cooperating individuals. The comfort and well-being that we experience depends on far-away friendly hands and minds, since trade is global, and the exchange of ideas is also global.

2.11 Two sides of human nature

Looking at human nature, both from the standpoint of evolution and from that of everyday experience, we see the two faces of Janus; one face shines radiantly; the other is dark and menacing. Two souls occupy the human breast, one warm and friendly, the other

murderous. Humans have developed a genius for cooperation, the basis for culture and civilization; but they are also capable of genocide; they were capable of massacres during the Crusades, capable of genocidal wars against the Amerinds, capable of the Holocaust, of Hiroshima, of the killing-fields of Cambodia, of Rwanda, and of Darfur

As an example of the two sides of human nature, we can think of Scandinavia. The Vikings were once feared throughout Europe. The Book of Common Prayer in England contains the phrase “Protect us from the fury of the Northmen!”. Today the same people are so peaceful and law-abiding that they can be taken as an example for how we would like a future world to look. Human nature has the possibility for both kinds of behavior depending on the circumstances. This being so, there are strong reasons to enlist the help of education and religion to make the bright side of human nature win over the dark side. Today, the mass media are an important component of education, and thus the mass media have a great responsibility for encouraging the cooperative and constructive side of human nature rather than the dark and destructive side.

2.12 Tribalism and agreed-upon lies

Members of tribelike groups throughout history have marked their identity by adhering to irrational systems of belief. Like the ritual scarification which is sometimes used by primitive tribes as a mark of identity, irrational systems of belief are also a mark of tribal identity. We parade these beliefs to demonstrate that we belong to a special group and that we are proud of it. The more irrational the belief is, the better it serves this purpose. When you and I tell each other that we believe the same nonsense, a bond is forged between us. The worse the nonsense is, the stronger the bond.

Sometimes motives of advantage are mixed in. As the Nobel Laureate biochemist Albert Szent-Györgyi observed, evolution designed the human mind, not for finding truth, but for finding advantage. Within the Orwellian framework of many modern nations, it is extremely disadvantageous to hold the wrong opinions. The wiretappers know what you are thinking.

Also, people often believe what will make them happy. How else can we explain the denial of climate change in the face of massive evidence to the contrary?

But truth has the great virtue that it allows us to accurately predict the future. If we ignore truth because it is unfashionable, or painful, or heretical, the future will catch us unprepared.

2.13 From tribalism to nationalism

70,000 years ago, our hunter-gatherer ancestors lived in tribes. Loyalty to the tribe was natural for our ancestors, as was collective work on tribal projects. Today, at the start of the 21st century, we live in nation-states to which we feel emotions of loyalty very similar to the tribal emotions of our ancestors.

The enlargement of the fundamental political and social unit has been made necessary and possible by improved transportation and communication, and by changes in the techniques of warfare. In Europe, for example, the introduction of canons in warfare made it possible to destroy castles, and thus the power of central monarchs was increased at the expense of feudal barons. At the same time, improved roads made merchants wish to trade freely over larger areas. Printing allowed larger groups of people to read the same books and newspapers, and thus to experience the same emotions. Therefore the size of the geographical unit over which it was possible to establish social and political cohesion became enlarged.

The tragedy of our present situation is that the same forces that made the nation-state replace the tribe as the fundamental political and social unit have continued to operate with constantly-increasing intensity. For this reason, the totally sovereign nation-state has become a dangerous anachronism. Although the world now functions as a single unit because of modern technology, its political structure is based on fragments, on absolutely-sovereign nation states - large compared to tribes, but too small for present-day technology, since they do not include all of mankind. Gross injustices mar today's global economic interdependence, and because of the development of thermonuclear weapons, the continued existence of civilization is threatened by the anarchy that exists today at the international level.

In this chapter, we will discuss nationalism in Europe, and especially the conflicts between absolutely sovereign nation-states that led to the two World Wars. However, it is important to remember that parallel to this story, run others, equally tragic - conflicts in the Middle East, the Vietnam War, the Cuban Missile Crisis, conflicts between India and Pakistan, the Korean War, the two Gulf Wars, and so on. In all of these tragedies, the root the trouble is that international interdependence exists in practice because of modern technology, but our political institutions, emotions and outlook are at the stunted level of the absolutely sovereign nation-state. Although we focus here on German nationalism as an example, and although historically it had terrible consequences, it is not a danger today. Germany is now one of the world's most peaceful and responsible countries, and the threats to world peace now come from nationalism outside Europe.

2.14 Nationalism in Europe

There is no doubt that the founders of nationalism in Europe were idealists; but the movement that they created has already killed more than sixty million people in two world wars, and today it contributes to the threat of a catastrophic third world war.

Nationalism in Europe is an outgrowth of the Enlightenment, the French Revolution, and the Romantic Movement. According to the philosophy of the Enlightenment and the ideas of the French Revolution, no government is legitimate unless it derives its power from the will of the people. Speaking to the Convention of 1792, Danton proclaimed that "by sending us here as deputies, the French Nation has brought into being a grand committee for the general insurrection of peoples."

Since all political power was now believed to be vested in the “nation”, the question of national identity suddenly became acutely important. France itself was a conglomeration of peoples - Normans, Bretons, Provencaux, Burgundians, Flemings, Germans, Basques, and Catalans - but these peoples had been united under a strong central government since the middle ages, and by the time of the French Revolution it was easy for them to think of themselves as a “nation”. However, what we now call Germany did not exist. There was only a collection of small feudal principalities, in some of which the most common language was German.

The early political unity of France enabled French culture to dominate Europe during the 17th and 18th centuries. Frederick the Great of Prussia and his court spoke and wrote in French. Frederick himself regarded German as a language of ignorant peasants, and on the rare occasions when he tried to speak or write in German, the result was almost incomprehensible. The same was true in the courts of Brandenburg, Saxony, Pomerania, etc. Each of them was a small-scale Versailles. Below the French-speaking aristocracy was a German-speaking middle class and a German or Slavic-speaking peasantry.

The creators of the nationalist movement in Germany were young middle-class German-speaking students and theologians who felt frustrated and stifled by the narrow *kleinstädtisch* provincial atmosphere of the small principalities in which they lived. They also felt frustrated because their talents were completely ignored by the French-speaking aristocracy. This was the situation when the armies of Napoleon marched across Europe, easily defeating and humiliating both Prussia and Austria. The young German-speaking students asked themselves what it was that the French had that they did not have.

The answer was not hard to find. What the French had was a sense of national identity. In fact, the French Revolution had unleashed long-dormant tribal instincts in the common people of France. It was the fanatical support of the Marseillaise-singing masses that made the French armies invincible. The founders of the German nationalist movement concluded that if they were ever to have a chance of defeating France, they would have to inspire the same fanaticism in their own peoples. They would have to touch the same almost-forgotten cord of human nature that the French Revolution had touched.

The common soldiers who fought in the wars of Europe in the first part of the 18th century were not emotionally involved. They were recruited from the lowest ranks of society, and they joined the army of a king or prince for the sake of money. All this was changed by the French Revolution. In June, 1792, the French Legislative Assembly decreed that a Fatherland Alter be erected in each commune with the inscription, “The citizen is born, lives and dies for *la patrie*.” The idea of a “Fatherland Alter” clearly demonstrates the quasi-religious nature of French nationalism.

The soldiers in Napoleon’s army were not fighting for the sake of money, but for an ideal that they felt to be larger and more important than themselves - Republicanism and the glory of France. The masses, who for so long had been outside of the politics of a larger world, and who had been emotionally involved only in the affairs of their own village, were now fully aroused to large-scale political action. The surge of nationalist feeling in France was tribalism on an enormous scale - tribalism amplified and orchestrated by new means of mass communication.



Figure 2.9: A portrait of Napoleon (as he liked to see himself).



Figure 2.10: **A romantic figure representing Germany**

This was the phenomenon with which the German nationalists felt they had to contend.

One of the founders of the German nationalist movement was Johan Gottlieb Fichte (1762-1814), a follower of the philosopher Immanuel Kant (1724-1804). Besides rejecting objective criteria for morality, Fichte denied the value of the individual. According to him, the individual is nothing and the state is everything. Denying the value of the individual, Fichte compared the state to an organism of which the individual is a part:

“In a product of nature”, Fichte wrote, “no part is what it is but through its relation to the whole, and it would absolutely not be what it is apart from this relation; more, if it had no organic relation at all, it would be absolutely nothing, since without reciprocity in action between organic forces maintaining one another in equilibrium, no form would subsist... Similarly, man obtains a determinate position in the scheme of things and a fixity in nature only through his civil association... Between the isolated man and the citizen there is the same relation as between raw and organized matter... In an organized body, each part continuously maintains the whole, and in maintaining it, maintains itself also. Similarly the citizen with regard to the State.”

Another post-Kantian, Adam Müller (1779-1829) wrote that “the state is the intimate association of all physical and spiritual needs of the whole nation into one great, energetic, infinitely active and living whole... the totality of human affairs... If we exclude for ever from this association even the most unimportant part of a human being, if we separate private life from public life even at one point, then we no longer perceive the State as a phenomenon of life and as an idea.”

The doctrine that Adam Müller sets forth in this passage is what we now call Totali-

tarianism, i.e. the belief that the state ought to encompass “the totality of human affairs”. This doctrine is the opposite of the Liberal belief that the individual is all-important and that the role of the state ought to be as small as possible.

Fichte maintains that “a State which constantly seeks to increase its internal strength is forced to desire the gradual abolition of all favoritisms, and the establishment of equal rights for all citizens, in order that it, the State itself, may enter upon its own true right - to apply the whole surplus power of all its citizens without exception to the furtherance of its own purposes... Internal peace, and the condition of affairs in which everyone may by diligence earn his daily bread... is only a means, a condition and framework for what love of Fatherland really wants to bring about, namely that the Eternal and the Divine may blossom in the world and never cease to become more pure, perfect and excellent.”

Fichte proposed a new system of education which would abolish the individual will and teach individuals to become subservient to the will of the state. “The new education must consist essentially in this”, Fichte wrote, “that it completely destroys the will in the soil that it undertakes to cultivate... If you want to influence a man at all, you must do more than merely talk to him; you must fashion him, and fashion him, and fashion him in such a way that he simply cannot will otherwise than you wish him to will.”

Fichte and Herder (1744-1803) developed the idea that language is the key to national identity. They believed that the German language is superior to French because it is an “original” language, not derived from Latin. In a poem that is obviously a protest against the French culture of Frederick’s court in Prussia, Herder wrote:

“Look at other nationalities!
Do they wander about
So that nowhere in the world they are strangers
Except to themselves?
They regard foreign countries with proud disdain.
And you, German, alone, returning from abroad,
Wouldst greet your mother in French?
Oh spew it out before your door!
Spew out the ugly slime of the Seine!
Speak German, O you German!

Another poem, “The German Fatherland”, by Ernst Moritz Arndt (1769-1860), expresses a similar sentiment:

“What is the Fatherland of the German?
Name me the great country!
Where the German tongue sounds
And sings *Lieder* in God’s praise,
That’s what it ought to be
Call that thine, valiant German!
That is the Fatherland of the German,
Where anger roots out foreign nonsense,
Where every Frenchman is called enemy,
Where every German is called friend,
That’s what it ought to be!
It ought to be the whole of Germany!”

It must be remembered that when these poems were written, the German nation did not exist except in the minds of the nationalists. Groups of people speaking various dialects of German were scattered throughout central and eastern Europe. In many places, the German-speaking population was a minority. To bring together these scattered German-speaking groups would require, in many cases, the conquest and subjugation of Slavic majorities; but the quasi-religious fervor of the nationalists was such that aggression took on the appearance of a “holy war”. Fichte believed that war between states introduces “a living and progressive principle into history”. By war he did not mean a decorous limited war of the type fought in the 18th century, but “...a true and proper war - *a war of subjugation!*”

The German nationalist movement was not only quasi-religious in its tone; it also borrowed psychological techniques from religion. It aroused the emotions of the masses to large-scale political activity by the use of semi-religious political liturgy, involving myth, symbolism, and festivals. In his book “German Society” (1814), Arndt advocated the celebration of “holy festivals”. For example, he thought that the celebration of the pagan festival of the summer solstice could be combined with a celebration of the victory over Napoleon at the Battle of Leipzig.

Arndt believed that special attention should be given to commemoration of the “noble dead” of Germany’s wars for, as he said, “...here history enters life, and life becomes part of history”. Arndt advocated a combination of Christian and pagan symbolism. The festivals should begin with prayers and a church service; but in addition, the Oak leaves and the sacred flame of ancient pagan tradition were to play a part.

In 1815, many of Arndt’s suggestions were followed in the celebration of the anniversary of the Battle of Leipzig. This festival clearly exhibited a mixing of secular and Christian elements to form a national cult. Men and women decorated with oak leaves made pilgrimages to the tops of mountains, where they were addressed by priests speaking in front of altars on which burned “the sacred flame of Germany’s salvation”. This borrowing of psychological techniques from religion was deliberate, and it was retained by the Nazi Party when the latter adopted the methods of the early German nationalists. The Nazi mass rallies retained the order and form of Protestant liturgy, including hymns, confessions of



Figure 2.11: Celebration of the “German May” at Hambrach Castle

faith, and responses between the leader and the congregation.⁵

In 1832, the first mass meeting in German history took place, when 32,000 men and women gathered to celebrate the “German May”. Singing songs, wearing black, red, and gold emblems, and carrying flags, they marched to Hambrach Castle, where they were addressed by their leaders.

By the 1860’s the festivals celebrating the cult of nationalism had acquired a definite form. Processions through a town, involving elaborate national symbolism, were followed by unison singing by men’s choirs, patriotic plays, displays by gymnasts and sharp-shooters, and sporting events. The male choirs, gymnasts and sharp-shooters were required to wear uniforms; and the others attending the festivals wore oak leaves in their caps. The cohesion of the crowd was achieved not only by uniformity of dress, but also by the space in which the crowd was contained. Arndt advocated the use of a “sacred space” for mass meetings. The idea of the “sacred space” was taken from Stonehenge, which was seen by the nationalists as a typical ancient Germanic meeting place. The Nazi art historian Hubert Schrade wrote: “The space which urges us to join the community of the *Volk* is of greater importance than the figure which is meant to represent the Fatherland.”

Dramas were also used to promote a feeling of cohesion and national identity. An example of this type of propagandist drama is Kleist’s play, “Hermann’s Battle”, (1808). The play deals with a Germanic chieftain who, in order to rally the tribes against the Romans, sends his own men, disguised as Roman soldiers, to commit atrocities in the neighboring German villages. At one point in the play, Hermann is told of a Roman soldier

⁵ The Nazi sacred symbols and the concept of the swastika or “gamma cross”, the eagle, the red/black/white color scheme, the ancient Nordic runes (one of which became the symbol of the SS), were all adopted from esoteric traditions going back centuries, shared by Brahmins, Scottish Masons, Rosicrutians, the Knights Templars and other esoteric societies.

who risked his own life to save a German child in a burning house. Hearing this report, Hermann exclaims, “May he be cursed if he has done this! He has for a moment made my heart disloyal; he has made me for a moment betray the august cause of Germany!... I was counting, by all the gods of revenge, on fire, loot, violence, murder, and all the horrors of unbridled war! What need have I of Latins who use me well?”

At another point in the play, Hermann’s wife, Thusnelda, tempts a Roman Legate into a romantic meeting in a garden. Instead of finding Thusnelda, the Legate finds himself locked in the garden with a starved and savage she-bear. Standing outside the gate, Thusnelda urges the Legate to make love to the she-bear, and, as the bear tears him to pieces, she faints with pleasure.

Richard Wagner’s dramas were also part of the nationalist movement. They were designed to create “an unending dream of sacred *völkisch* revelation”. No applause was permitted, since this would disturb the reverential atmosphere of the cult. A new type of choral theater was developed which “...no longer represented the fate of the individual to the audience, but that which concerns the community, the *Volk*... Thus, in contrast to the bourgeois theater, private persons are no longer represented, but only types.”

We have primarily been discussing the growth of German nationalism, but very similar movements developed in other countries throughout Europe and throughout the world. Characteristic for all these movements was the growth of state power, and the development of a reverential, quasi-religious, attitude towards the state. Patriotism became “a sacred duty.” According to Georg Wilhelm Fredrich Hegel, “The existence of the State is the movement of God in the world. It is the ultimate power on earth; it is its own end and object. It is an ultimate end that has absolute rights against the individual.”

Nationalism in England (as in Germany) was to a large extent a defensive response against French nationalism. At the end of the 18th century, the liberal ideas of the Enlightenment were widespread in England. There was much sympathy in England with the aims of the French Revolution, and a similar revolution almost took place in England. However, when Napoleon landed an army in Ireland and threatened to invade England, there was a strong reaction towards national self-defense. The war against France gave impetus to nationalism in England, and military heroes like Wellington and Nelson became objects of quasi-religious worship. British nationalism later found an outlet in colonialism.

Italy, like Germany, had been a collection of small principalities, but as a reaction to the other nationalist movements sweeping across Europe, a movement for a united Italy developed. The conflicts between the various nationalist movements of Europe produced the frightful world wars of the 20th century. Indeed, the shot that signaled the outbreak of World War I was fired by a Serbian nationalist.

War did not seem especially evil to the 18th and 19th century nationalists because technology had not yet given humanity the terrible weapons of the 20th century. In the 19th century, the fatal combination of space-age science and stone-age politics still lay in the future. However, even in 1834, the German writer Heinrich Heine was perceptive enough to see the threat:

“There will be”, Heine wrote, “Kantians forthcoming who, in the world to come, will



Figure 2.12: Wagner's dramas were part of the quasi-religious cult of German nationalism.



Figure 2.13: A painting from Francisco de Goya's series on the *Disasters of War*.



Figure 2.14: *Y no hay remedio* (And it cannot be helped). Prisoners executed by firing squads, reminiscent of The Third of May 1808, from Goya's series on the *Disasters of War*.



Figure 2.15: Goya's *Enterrar y callar* (Bury them and keep quiet). Atrocities, starvation and human degradation.



Figure 2.16: One of a series of prints which the German artist Käthe Kollwitz (1867-1945) made as a protest against the atrocities of World War I.



Figure 2.17: Another anti-war print by Käthe Kollwitz.



Figure 2.18: *Never Again War* by Käthe Kollwitz.



Figure 2.19: *Never Again War* (poster) by Käthe Kollwitz.



Figure 2.20: *About Mothers and Children* by Käthe Kollwitz.

know nothing of reverence for aught, and who will ravage without mercy, and riot with sword and axe through the soil of all European life to dig out the last root of the past. There will be well-weaponed Fichtians upon the ground, who in the fanaticism of the Will are not restrained by fear or self-advantage, for they live in the Spirit."

Suggestions for further reading

1. C. Darwin, *The Expression of Emotions in Man and Animals*, The University of Chicago Press (1965).
2. P. Kropotkin, *Mutual Aid, A Factor in Evolution*, Walter Heinemann, London, (1902).
3. R.A. Fischer, *The Genetical Theory of Natural Selection*, Clarendon, Oxford, (1930).
4. J.B.S. Haldane, *Population genetics*, New Biology **18**, 34-51, (1955).
5. L. Margulis, *Symbiosis as a Source of Evolutionary Innovation: Speciation and Morphogenesis*, The MIT Press, (1991).
6. L. Margulis, *Symbiosis in Cell Evolution: Microbial Communities in the Archean and Proterozoic Eons*, W.H. Freeman, (1992).
7. N. Tinbergen, *The Study of Instinct*, Oxford University Press, (1951).
8. I. Eibl-Eibesfeldt, *The Biology of Peace and War*, Thames and Hudson, New York (1979).
9. E.O. Wilson, *On Human Nature*, Bantam Books, New York, (1979).
10. R.A. Hinde, *Biological Bases of Human Social Behavior*, McGraw-Hill, New York (1977).
11. R.A. Hinde, *Individuals, Relationships and Culture: Links Between Ethology and the Social Sciences*, Cambridge University Press, (1987).
12. W.M. Senner, editor, *The Origins of Writing*, University of Nebraska Press, Lincoln and London, (1989).
13. P.J. Bowler, *Evolution: The History of an Idea*, University of California Press, (1989).
14. D.J. Futuyma, *Evolutionary Biology*, Sinauer Associates, Sunderland Mass., (1986).
15. B. Glass, O. Temkin, and W.L. Strauss, eds., *Forerunners of Darwin: 1745-1859*, Johns Hopkins Press, Baltimore, (1959).
16. R. Milner, *The Encyclopedia of Evolution*, an Owl Book, Henry Holt and Company, New York, (1990).
17. T.A. Appel, *The Cuvier-Geoffroy Debate: French Biology in the Decades before Darwin*, Oxford University Press, (1987).
18. P.J. Bowler, *Fossils and Progress: Paleontology and the Idea of Progressive Evolution in the Nineteenth Century*, Science History Publications, New York, (1976).
19. P. Corsi, *The Age of Lamarck: Evolutionary Theories in France, 1790-1834*, University of California Press, Berkeley, (1988).
20. M. McNeil, *Under the Banner of Science: Erasmus Darwin and his Age*, Manchester University Press, Manchester, (1987).
21. L.G. Wilson, *Sir Charles Lyell's Scientific Journals on the Species Question*, Yale University Press, New Haven, (1970).

22. A.B. Adams, *Eternal Quest: The Story of the Great Naturalists*, G.P. Putnam's Sons, New York, (1969).
23. A.S. Packard, *Lamarck, the Founder of Evolution: His Life and Work*, Longmans, Green, and Co., New York, (1901).
24. C. Darwin, *An historical sketch of the progress of opinion on the Origin of Species, previously to the publication of this work*, Appended to third and later editions of *On the Origin of Species*, (1861).
25. L. Eiseley, *Darwin's Century: Evolution and the Men who Discovered It*, Doubleday, New York, (1958).
26. H.F. Osborne, *From the Greeks to Darwin: The Development of the Evolution Idea Through Twenty-Four Centuries*, Charles Scribner and Sons, New York, (1929).
27. Sir Julian Huxley and H.B.D. Kettlewell, *Charles Darwin and his World*, Thames and Hudson, London (1965).
28. Allan Moorehead, *Darwin and the Beagle*, Penguin Books Ltd. (1971).
29. Francis Darwin (editor), *The Autobiography of Charles Darwin and Selected Letters*, Dover, New York (1958).
30. Charles Darwin, *The Voyage of the Beagle*, J.M. Dent and Sons Ltd., London (1975).
31. Charles Darwin, *The Origin of Species*, Collier MacMillan, London (1974).
32. Charles Darwin, *The Expression of Emotions in Man and Animals*, The University of Chicago Press (1965).
33. Ruth Moore, *Evolution*, Time-Life Books (1962).
34. L. Barber, *The Heyday of Natural History: 1820-1870*, Doubleday and Co., Garden City, New York, (1980).
35. A. Desmond, *Huxley*, Addison Wesley, Reading, Mass., (1994).
36. R. Owen, (P.R. Sloan editor), *The Hunterian Lectures in Comparative Anatomy, May-June, 1837*, University of Chicago Press, (1992).
37. C. Nichols, *Darwinism and the social sciences*, Phil. Soc. Scient. **4**, 255-277 (1974).
38. M. Ruse, *The Darwinian Revolution*, University of Chicago Press, (1979).
39. A. Desmond and J. Moore, *Darwin*, Penguin Books, (1992).
40. R. Dawkins, *The Extended Phenotype*, Oxford University Press, (1982).
41. R. Dawkins, *The Blind Watchmaker*, W.W. Norton, (1987).
42. R. Dawkins, *River out of Eden: A Darwinian View of Life*, Harper Collins, (1995).
43. R. Dawkins, *Climbing Mount Improbable*, W.W. Norton, (1996).
44. S.J. Gould, *Ever Since Darwin*, W.W. Norton, (1977).
45. R.G.B. Reid, *Evolutionary Theory: The Unfinished Synthesis*, Croom Helm, (1985).
46. M. Ho and P.T. Saunders, editors, *Beyond Neo-Darwinism: An Introduction to a New Evolutionary Paradigm*, Academic Press, London, (1984).
47. J. Maynard Smith, *Did Darwin Get it Right? Essays on Games, Sex and Evolution*, Chapman and Hall, (1989).
48. E. Sober, *The Nature of Selection: Evolutionary Theory in Philosophical Focus*, University of Chicago Press, (1984).
49. B.K. Hall, *Evolutionary Developmental Biology*, Chapman and Hall, London, (1992).
50. J. Thompson, *Interaction and Coevolution*, Wiley and Sons, (1982).

51. R.A. Fischer, *The Genetical Theory of Natural Selection*, Clarendon, Oxford, (1930).
52. J.B.S. Haldane, *Population genetics*, New Biology **18**, 34-51, (1955).
53. N. Tinbergen, *The Study of Instinct*, Oxford University Press, (1951).
54. N. Tinbergen, *The Herring Gull's World*, Collins, London, (1953).
55. N. Tinbergen, *Social Behavior in Animals*, Methuen, London, (1953).
56. N. Tinbergen, *Curious Naturalists*, Country Life, London, (1958).
57. N. Tinbergen, *The Animal in its World: Explorations of an Ethologist*, Allan and Unwin, London, (1973).
58. K. Lorenz, *On the evolution of behavior*, Scientific American, December, (1958).
59. K. Lorenz, *Evolution and Modification of Behavior* Harvard University Press, Cambridge, MA, (1961).
60. K. Lorenz, *Studies in Animal and Human Behavior. I and II.*, Harvard University Press, (1970) and (1971).
61. P.H. Klopfer and J.P. Hailman, *An Introduction to Animal Behavior: Ethology's First Century*, Prentice-Hall, New Jersey, (1969).
62. J. Jaynes, *The historical origins of "Ethology" and "Comparative Psychology"*, Anim. Behav. **17**, 601-606 (1969).
63. W.H. Thorpe, *The Origin and Rise of Ethology: The Science of the Natural Behavior of Animals*, Heinemann, London, (1979).
64. R.A. Hinde, *Animal Behavior: A Synthesis of Ethological and Comparative Psychology*, McGraw-Hill, New York, (1970).
65. J.H. Crook, editor, *Social Behavior in Birds and Mammals*, Academic Press, London, (1970).
66. P. Ekman, editor, *Darwin and Facial Expression*, Academic Press, New York, (1973).
67. P. Ekman, W.V. Friesen and P. Ekworth, *Emotions in the Human Face*, Pergamon, New York, (1972).
68. N. Blurton Jones, editor, *Ethological Studies of Child Behavior*, Cambridge University Press, (1975).
69. M. von Cranach, editor, *Methods of Inference from Animals to Human Behavior*, Chicago/Mouton, Haag, (1976); Aldine, Paris, (1976).
70. K. Lorenz, *On Aggression*, Bantem Books, (1977).
71. I. Eibl-Eibesfeldt, *Ethology, The Biology of Behavior*, Holt, Rinehart and Winston, New York, (1975).
72. I. Eibl-Eibesfeldt and F.K. Salter, editors, *Indoctrinability, Ideology, and Warfare: Evolutionary Perspectives*, Berghahn Books, (1998).
73. I. Eibl-Eibesfeldt, *Human Ethology*, Walter De Gruyter Inc., (1989).
74. I. Eibl-Eibesfeldt, *Love and Hate*, Walter De Gruyter Inc., (1996).
75. J. Bowlby, *By ethology out of psychoanalysis: An experiment in interbreeding*, Animal Behavior, **28**, 649-656 (1980).
76. B.B. Beck, *Animal Tool Behavior*, Garland STPM Press, New York, (1980).
77. R. Axelrod, *The Evolution of Cooperation*, Basic Books, New York, (1984).
78. J.D. Carthy and F.L. Ebling, *The Natural History of Aggression*, Academic Press, New York, (1964)

79. D.L. Cheney and R.M. Seyfarth, *How Monkeys See the World: Inside the Mind of Another Species*, University of Chicago Press, (1990).
80. F. De Waal, *Chimpanzee Politics*, Cape, London, (1982).
81. M. Edmunds, *Defense in Animals*, Longman, London, (1974).
82. R.D. Estes, *The Behavior Guide to African Mammals*, University of California Press, Los Angeles, (1991).
83. R.F. Ewer, *Ethology of Mammals*, Logos Press, London, (1968).
84. E. Morgan, *The Scars of Evolution*, Oxford University Press, (1990).
85. W.D. Hamilton, *The genetical theory of social behavior. I and II*, J. Theor. Biol. **7**, 1-52 (1964).
86. R. Dawkins, *The Selfish Gene*, Oxford University Press, (1989).
87. R.W. Sussman, *The Biological Basis of Human Behavior*, Prentice Hall, Englewood Cliffs, (1997).
88. Irenäus Eibl-Eibesfeldt, *The Biology of Peace and War*, Thames and Hudson, New York (1979).
89. R.A. Hinde, *Biological Bases of Human Social Behavior*, McGraw-Hill, New York (1977).
90. R.A. Hinde, *Towards Understanding Relationships*, Academic Press, London (1979).
91. Albert Szent-Györgyi, *The Crazy Ape*, Philosophical Library, New York (1970).
92. E.O. Wilson, *Sociobiology*, Harvard University Press (1975).
93. C. Zhan-Waxler, *Altruism and Aggression: Biological and Social Origins*, Cambridge University Press (1986).
94. D.R. Griffin, *Animal Mind - Human Mind*, Dahlem Konferenzen 1982, Springer, Berlin, (1982).
95. R. Dart, *The predatory transition from ape to man*, International Anthropological and Linguistic Review, **1**, (1953).
96. S. Savage-Rumbaugh, R. Lewin, et al., *Kanzi: The Ape at the Brink of the Human Mind*, John Wiley and Sons, New York, (1996).
97. R. Dunbar, *Grooming, Gossip, and the Evolution of Language*, Harvard University Press, (1998).
98. M.E. Bitterman, *The evolution of intelligence*, Scientific American, January, (1965).
99. R. Fox, *In the beginning: Aspects of hominid behavioral evolution*, Man, **NS 2**, 415-433 (1967).
100. M.S. Gazzaniga, *The split brain in man*, Scientific American, **217**, 24-29 (1967).
101. D. Kimura, *The asymmetry of the human brain*, Scientific American, **228**, 70-78 (1973).
102. R.G. Klein, *Anatomy, behavior, and modern human origins*, Journal of World Prehistory, **9 (2)**, 167-198 (1995).
103. N.G. Jablonski and L.C. Aiello, editors, *The Origin and Diversification of Language*, Wattis Symposium Series in Anthropology. Memoirs of the California Academy of Sciences, No. 24, The California Academy of Sciences, San Francisco, (1998).
104. S. Pinker, *The Language Instinct: How the Mind Creates Language*, Harper-Collins Publishers, New York, (1995).

105. J.H. Barkow, L. Cosmides and J. Tooby, editors, *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, Oxford University Press, (1995).
106. D.R. Begun, C.V. Ward and M.D. Rose, *Function, Phylogeny and Fossils: Miocene Hominid Evolution and Adaptations*, Plenum Press, New York, (1997).
107. R.W. Byrne and A.W. Whitten, *Machiavellian Intelligence: Social Expertise and the Evolution of Intellect in Monkeys, Apes and Humans*, Cambridge University Press, (1988),
108. V.P. Clark, P.A. Escholz and A.F. Rosa, editors, *Language: Readings in Language and Culture*, St Martin's Press, New York, (1997).
109. T.W. Deacon, *The Symbolic Species: The Co-evolution of Language and the Brain*, W.W. Norton and Company, New York, (1997).
110. C. Gamble, *Timewalkers: The Prehistory of Global Colonization*, Harvard University Press, (1994).
111. K.R. Gibson and T. Ingold, editors, *Tools, Language and Cognition in Human Evolution*, Cambridge University Press, (1993).
112. P. Mellers, *The Emergence of Modern Humans: An Archaeological Perspective*, Edinburgh University Press, (1990).
113. P. Mellers, *The Neanderthal Legacy: An Archaeological Perspective of Western Europe*, Princeton University Press, (1996).
114. S. Mithen, *The Prehistory of the Mind*, Thames and Hudson, London, (1996).
115. D. Haraway, *Signs of dominance: from a physiology to a cybernetics of primate biology*, *C.R. Carpenter, 1939-1970*, Studies in History of Biology, **6**, 129-219 (1983).
116. D. Johanson and M. Edey, *Lucy: The Beginnings of Humankind*, Simon and Schuster, New York, (1981).
117. B. Kurtén, *Our Earliest Ancestors*, Colombia University Press, New York, (1992).
118. R.E. Leakey and R. Lewin, *Origins Reconsidered*, Doubleday, New York, (1992).
119. P. Lieberman, *The Biology and Evolution of Language*, Harvard University Press, (1984).
120. J.D. Wall and M. Przeworski, *When did the human population size start increasing?*, *Genetics*, **155**, 1865-1874 (2000).
121. L. Aiello and C. Dean, *An Introduction to Human Evolutionary Anatomy*, Academic Press, London, (1990).
122. F. Ikawa-Smith, ed., *Early Paleolithic in South and East Asia*, Mouton, The Hague, (1978).
123. R.R. Baker, *Migration: Paths Through Space and Time*, Hodder and Stoughton, London, (1982).
124. P. Bellwood, *Prehistory of the Indo-Malaysian Archipelago*, Academic Press, Sidney, (1985).
125. P.J. Bowler, *Theories of Human Evolution: A Century of Debate, 1884-1944*, Basil Blackwell, Oxford, (1986).
126. G. Isaac and M. McCown, eds., *Human Origins: Louis Leaky and the East African Evidence*, Benjamin, Menlo Park, (1976).

127. F.J. Brown, R. Leaky, and A. Walker, *Early Homo erectus skeleton from west Lake Turkana, Kenya*, *Nature*, **316**, 788-92, (1985).
128. K.W. Butzer, *Archeology as Human Ecology*, Cambridge University Press, (1982).
129. A.T. Chamberlain and B.A. Wood, *Early hominid phylogeny*, *Journal of Human Evolution*, **16**, 119-33, (1987).
130. P. Mellars and C. Stringer, eds., *The Human Revolution: Behavioural and Biological Perspectives in the Origins of Modern Humans*, Edinburgh University Press, (1989).
131. G.C. Conroy, *Primate Evolution*, W.W. Norton, New York, (1990).
132. R.I.M. Dunbar, *Primate Social Systems*, Croom Helm, London, (1988).
133. B. Fagan, *The Great Journey: The Peopling of Ancient America*, Thames and Hudson, London, (1987).
134. R.A. Foley, ed., *Hominid Evolution and Community Ecology*, Academic Press, New York, (1984).
135. S.R. Binford and L.R. Binford, *Stone tools and human behavior*, *Scientific American*, **220**, 70-84, (1969).
136. G. Klein, *The Human Career, Human Biological and Cultural Origins*, University of Chicago Press, (1989).
137. B.F. Skinner and N. Chomsky, *Verbal behavior*, *Language*, **35** 26-58 (1959).
138. D. Bickerton, *The Roots of Language*, Karoma, Ann Arbor, Mich., (1981).
139. E. Lenneberg in *The Structure of Language: Readings in the Philosophy of Language*, J.A. Fodor and J.A. Katz editors, Prentice-Hall, Englewood Cliffs N.J., (1964).
140. S. Pinker, *Talk of genetics and visa versa*, *Nature*, **413**, 465-466, (2001).
141. S. Pinker, *Words and rules in the human brain*, *Nature*, **387**, 547-548, (1997).
142. M. Ruhelen, *The Origin of Language*, Wiley, New York, (1994).
143. C.B. Stringer and R. McKie, *African Exodus: The Origins of Modern Humanity*, Johnathan Cape, London (1996).
144. R.W. Sussman, *The Biological Basis of Human Behavior*, Prentice Hall, Englewood Cliffs, (1997).
145. D.P. Barash *Sociobiology and Behavior*, Elsevier, New York, (1977).
146. J.D. Carthy and F.J. Eblin, eds., *The Natural History of Aggression*, Academic Press, New York, (1964).
147. N.A. Chagnon and W. Irons, eds., *Evolutionary Biology and Human Social Behavior, an Anthropological Perspective*, Duxbury Press, N. Scituate, MA, (1979).
148. E. Danielson, *Vold, en Ond Arv?*, Gyldendal, Copenhagen, (1929).
149. M.R. Davie, *The Evolution of War*, Yale University Press, New Haven, CT, (1929).
150. T. Dobzhanski, *Mankind Evolving*, Yale University Press, New Haven, CT, (1962).
151. I. Eibl-Eibesfeldt, *Der Vorprogramiert Mensch*, Molden, Vienna, (1973).
152. I. Eibl-Eibesfeldt, *Ethology, the Biology of Behavior*, Holt, Rinehart and Winston, New York, (1975).
153. I. Eibl-Eibesfeldt, *Liebe und Hass*, Molden, Vienna, (1973).
154. R.L. Holloway, *Primate Aggression: Territoriality and Xenophobia*, Academic Press, New York, (1974).

155. P. Kitcher, *Vaulting Ambition: Sociobiology and the Quest for Human Nature*, MIT Press, Cambridge, MA, (1985).
156. S.L.W. Mellen, *The Evolution of Love*, Freeman, Oxford, (1981).
157. A. Roe and G.G. Simpson, *Behavior and Evolution*, Yale University Press, New Haven, CT, (1958).
158. N.J. Smelser, *The Theory of Collective Behavior*, Free Press, New York, (1963).
159. R. Trivers, *Social Evolution*, Benjamin/Cummings, Menlo Park, CA, (1985).
160. W. Weiser, *Konrad Lorenz und seine Kritiker*, Piper, Munich, (1976).
161. W. Wickler, *Biologie der 10 Gebote*, Piper, Munich, (1971).
162. J.H. Bodley, *Cultural Anthropology: Tribes, States, and the Global System*, 3rd ed., Mayfield, Mountain View, CA, (2000).
163. K. Raaflaub and N. Rosenstein, eds., *War and Society in the Ancient and Medieval Worlds*, Harvard University Press and Center for Hellenic Studies, (1999).
164. Elie Kedourie, *Nationalism*, Hutchison University Library, Third Edition, (1966).
165. Eugene Kamenka, editor, *Nationalism*, Edward Arnold Ltd., London, (1976).
166. Elie Kedourie, editor, *Nationalism in Asia and Africa*, New American Library, (1970).
167. G. Allport, *The Nature of Prejudice*, Doubleday Anchor Books, New York, (1958).
168. I.A. Berg and B.M. Bass, eds., *Conformity and Deviation*, Harper and Row, New York, (1961).
169. W. Buchanan and H. Cantril, *How Nations See Each Other*, University of Illinois Press, Urbana, IL, (1953).
170. H.C.J. Duijker and N.H. Frijda, *National Character and National Stereotypes*, North-Holland Publishing Co., Amsterdam, (1960).
171. S. Freud, *Warum Krieg? Das Bild vom Feind*, Arbeitsgem. Friedenspädagogik, (1983).
172. S. Freud, *Why War?*, in *The Basic Writings of Sigmund Freud*, A.A. Brill, ed., Modern Library, (1995).
173. S. Freud, *Civilization, War and Death. Psycho-analytical Epitomes No. 4*, Hogarth Press, London, (1953).
174. S. Keen, *Faces of the Enemy: Reflections of the Hostile Imagination*, Harper and Row, San Francisco, (1986).
175. W.E. Lampert, *Children's Views of Foreign Peoples*, Appleton-Century-Crofts, New York, (1967).
176. R.A. Levine and D.T. Campbell, *Ethnocentrism: Theories of Theories of Conflict, Ethnic Attitudes and Group Behavior*, Wiley, New York, (1972).
177. V.D. Volken, *Cyprus: War and Adaption: A Psychoanalytical History of Two Ethnic Groups in Conflict*, University Press of Virginia, Charlottesville, VA, (1979).
178. L. Durrell, *Bitter Lemons* (nationalism in the Cyprus conflicts), Faber and Faber, London, (1957).
179. N. Choucri and R. North, *Nations in Conflict: National Growth and International Violence*, W.H. Freeman, San Francisco, (1975).
180. R. Cohen, *Warfare and State Formation*, in *Warfare, Culture and the Environment*, B. Ferguson, ed., Academic Press, Orlando, (1984).

181. A. Giddens, *The Nation-State and Violence: Volume Two of a Contemporary Critique of Historical Materialism*, University of California, Berkeley, CA, (1985).
182. M. Haas, *Social Change and National Aggressiveness, 1900-1960*, in *Quantitative International Politics*, J.D. Singer, ed., Free Press, New York, (1968).
183. W. Schwartzwaller, *The Unknown Hitler*, Berkeley Books, (1990).
184. Francis King, *Satan and the Swastika*, Mayflower, St. Albans, (1976).
185. J.M. Angebert, *The Occult and the Third Reich*, New York, (1974).
186. J.H. Brennan, *Occult Reich*, New York, (1974).
187. N. Goodrick-Clarke, *The Occult Roots of Nazism*, Aquarium Press, Wellingborough, (1985).
188. T. Ravenscroft, *The Spear of Destiny*, Putnam's, New York, (1974).
189. D. Sklar, *The Nazis and the Occult*, Dorset Press, New York, (1977).
190. W. Schirer, *The Rise and Fall of the Third Reich*, Crest Books, New York, (1962).
191. E.J. Hobsbawn, *The Age of Empire, 1875-1914*, Vintage Books, (1989).
192. L. James, *The Rise and Fall of the British Empire*, St Martin's Press, (1997).
193. N. Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, Basic Books, (2003).
194. S. Schama, *The Fate of Empire, 1776-2000*, Miramax, (2002).
195. A.P. Thorton, *The Imperial Idea and Its Enemies: A Study in British Power*, Palgrave Macmillan, (1985).
196. H. Mejer, *Imperial Quest for Oil: Iraq, 1910-1928*, Ithaca Books, London, (1976).
197. P. Sluglett, *Britain in Iraq, 1914-1932*, Ithaca Press, London, (1976).
198. D.E. Omissi, *British Air Power and Colonial Control in Iraq, 1920-1925*, Manchester University Press, Manchester, (1990).
199. V.G. Kiernan, *Colonial Empires and Armies, 1815-1960*, Sutton, Stroud, (1998).
200. R. Solh, *Britain's 2 Wars With Iraq*, Ithaca Press, Reading, (1996).
201. D. Hiro, *The Longest War: The Iran-Iraq Military Conflict*, Routledge, New York, (1991).
202. T.E. Lawrence, *A Report on Mesopotamia by T.E. Lawrence*, Sunday Times, August 22, (1920).
203. D. Fromkin, *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*, Owl Books, (2001).
204. T. Rajamoorthy, *Deceit and Duplicity: Some Reflections on Western Intervention in Iraq*, Third World Resurgence, March-April, (2003).
205. P. Knightley and C. Simpson, *The Secret Lives of Lawrence of Arabia*, Nelson, London, (1969).
206. G. Lenczowski, *The Middle East in World Affairs*, Cornell University Press, (1962).
207. John A. Hobson, *Imperialism; A Study*, (1902).
208. P. Cain and T. Hopkins, *British Imperialism, 1688-200*, Longman, (2000).
209. N. Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, Basic Books, (2003).
210. G. Kolko, *Another Century of War*, New Press, (2002).

211. G. Kolko, *Confronting the Third World: United States Foreign Policy, 1945-1980*, Pantheon Books, (1988).
212. M.T. Klare, *Resource Wars: The New Landscape of Global Conflict*, Owl Books reprint edition, New York, (2002).
213. Y. Nakash, *The Shi'is of Iraq*, Princeton University Press, (1994).
214. D. Fromkin, *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*, Owl Books, (2001).
215. S.K. Aburish, *Saddam Hussein: The Politics of Revenge*, Bloomsbury, London, (2001).
216. M. Muffti, *Sovereign Creations: Pan-Arabism and Political Order in Syria and Iraq*, Cornell University Press, (1996).
217. C. Clover, *Lessons of the 1920 Revolt Lost on Bremer*, Financial Times, November 17, (2003).
218. J. Kifner, *Britain Tried First. Iraq Was No Picnic Then*, New York Times, July 20, (2003).
219. J. Feffer, B. Eggenreich and M.T. Klare, *Power Trip: US Unilateralism and Global Strategy After September 11*, Seven Stories Press, (2003).
220. J.D. Rockefeller, *Random Reminiscences of Men and Events*, Doubleday, New York, (1909).
221. M.B. Stoff, *Oil, War and American Security: The Search for a National Policy on Oil, 1941-1947*, Yale University Press, New Haven, (1980).
222. W.D. Muscable, *George F. Kennan and the Making of American Foreign Policy*, Princeton University Press, Princeton, (1992).
223. J. Stork, *Middle East Oil and the Energy Crisis*, Monthly Review, New York, (1976).
224. F. Benn, *Oil Diplomacy in the Twentieth Century*, St. Martin's Press, New York, (1986).
225. R. Sale, *Saddam Key in Early CIA Plot*, United Press International, April 10, (2003).
226. K. Roosevelt, *Countercoup: The Struggle for the Control of Iran*, McGraw-Hill, New York, (1979).
227. J. Fitchett and D. Ignatius, *Lengthy Elf Inquiry Nears Explosive Finish*, International Herald Tribune, February 1, (2002).
228. M.T. Klare, *Resource Wars: The New Landscape of Global Conflict*, Owl Books reprint edition, New York, (2002).
229. M. Klare, *Bush-Cheney Energy Strategy: Procuring the Rest of the World's Oil*, Foreign Policy in Focus, (Interhemispheric Resource Center/Institute for Policy Studies/SEEN), Washington DC and Silver City NM, January, (2004).
230. M. Klare, *Endless Military Superiority*, The Nation magazine, July 15, (2002).
231. M.T. Klare, *Geopolitics Reborn: The Global Struggle Over Oil and Gas Pipelines*, Current History, December issue, 428-33, (2004).
232. P. Grose, *Allen Dulles: The Life of a Gentleman Spy*, Houghton Mifflin, Boston, (1994).
233. S. Warren, *Exxon's Profit Surged in 4th Quarter*, Wall Street Journal, February 12, (2004).

234. R. Suskind, *The Price of Loyalty: George W. Bush, the White House and the Education of Paul O'Neill*, Simon and Schuster, New York, (2004).
235. D. Morgan and D.B. Ottaway, *In Iraqi War Scenario, Oil is Key Issue as U.S. Drillers Eye Huge petroleum Pool*, Washington Post, September 15, (2002).
236. D. Rose, *Bush and Blair Made Secret Pact for Iraqi War*, The Observer, April 4, (2004).
237. E. Vulliamy, P. Webster and N.P. Walsh, *Scramble to Carve Up Iraqi Oil Reserves Lies Behind US Diplomacy*, The Observer, October 6, (2002).
238. Y. Ibrahim, *Bush's Iraq Adventure is Bound to Backfire*, International Herald Tribune, November 1, (2002).
239. P. Beaumont and F. Islam, *Carve-Up of Oil Riches Begins*, The Observer, November 3, (2002).
240. M. Dobbs, *US Had Key Role in Iraq Buildup*, Washington Post, December 30, (2002).
241. R. Sale, *Saddam Key in Early CIA Plot*, United Press International, April 10, (2003).
242. R. Morris, *A Tyrant Forty Years in the Making*, New York Times, March 14, (2003).
243. H. Batatu, *The Old Social Classes and the Revolutionary Movements of Iraq*, Princeton University Press, (1978).
244. D.W. Riegel, Jr., and A.M. D'Amato, *US Chemical and Biological Warfare-Related Dual Use Exports to Iraq and their Possible Impact on the Health Consequences of the Persian Gulf War*, Report to US Senate ("The Riegel Report"), May 25, (1994).
245. P.E. Tyler, *Officers Say US Aided Iraq in War Despite Use of Gas*, New York Times, August 18, (2002).
246. D. Priest, *Rumsfeld Visited Baghdad in 1984 to Reassure Iraqis, Documents Show*, Washington Post, December 19, (2003).
247. S. Zunes, *Saddam's Arrest Raises Troubling Questions*, Foreign Policy in Focus, <http://www.globalpolicy.org/>, December (2003).
248. D. Leigh and J. Hooper, *Britain's Dirty Secret*, Guardian, March 6, (2003).
249. J. Battle, (Ed.), *Shaking Hands With Saddam Hussein: The US Tilts Towards Iraq, 1980-1984*, National Security Archive Electronic Briefing Book No. 82, February 25, (2003).
250. J.R. Hiltermann, *America Didn't Seem to Mind Poison Gas*, International Herald Tribune, January 17, (2003).
251. D. Hiro, *Iraq and Poison Gas*, Nation, August 28, (2002).
252. T. Weiner, *Iraq Uses Techniques in Spying Against its Former Tutor, the US*, Philadelphia Inquirer, February 5, (1991).
253. S. Hussein and A. Glaspie, *Excerpts From Iraqi Document on Meeting with US Envoy*, The New York Times, International, September 23, (1990).
254. D. Omissi, *Baghdad and British Bombers*, Guardian, January 19, (1991).
255. D. Vernet, *Postmodern Imperialism*, Le Monde, April 24, (2003).
256. J. Buchan, *Miss Bell's Lines in the Sand*, Guardian, March 12, (2003).
257. C. Tripp, *Iraq: The Imperial Precedent*, Le Monde Diplomatique, January, (2003).
258. G.H.W. Bush and B. Scowcroft, *Why We Didn't Remove Saddam*, Time, 2 March, (1998).

259. J.A. Baker III, *The Politics of Diplomacy: Revolution, War and Peace, 1989-1992*, G.P. Putnam's Sons, New York, (1995).
260. H. Thomas, *Preventive War Sets Serious Precedent*, Seattle Post Intelligencer, March 20, (2003).
261. R.J. Barnet, *Intervention and Revolution: The United States in the Third World*, World Publishing, (1968).
262. T. Bodenheimer and R. Gould, *Rollback: Right-wing Power in U.S. Foreign Policy*, South End Press, (1989).
263. G. Guma, *Uneasy Empire: Repression, Globalization, and What We Can Do*, Toward Freedom, (2003).
264. W. Blum, *A Brief History of U.S. Interventions: 1945 to the Present*, Z magazine, June, (1999).
265. W. Blum, *Killing Hope: U.S. Military and CIA Intervention Since World War II*
266. J.M. Cypher, *The Iron Triangle: The New Military Buildup*, Dollars and Sense magazine, January/February, (2002).
267. L. Meyer, *The Power of One*, (World Press Review), Reforma, Mexico City, August 5, (1999).
268. W. Hartung, F. Berrigan and M. Ciarrocca, *Operation Endless Deployment: The War With Iraq Is Part of a Larger Plan for Global Military Dominance*, The Nation magazine, October 21, (2002).
269. I. Ramonet, *Servile States*, Le Monde diplomatique, Fromkin Paris, October (2002), World Press Review, December, (2002).
270. J.K. Galbraith, *The Unbearable Costs of Empire*, American Prospect magazine, November, (2002).
271. G. Monbiot, *The Logic of Empire*, The Guardian, August 6, (2002), World Press Review, October, (2002).
272. W.R. Pitt, *The Greatest Sedition is Silence*, Pluto Press, (2003).
273. J. Wilson, *Republic or Empire?*, The Nation magazine, March 3, (2003).
274. W.B. Gallie, *Understanding War: Points of Conflict*, Routledge, London, (1991).
275. R. Falk and S.S. Kim, eds., *The War System: An Interdisciplinary Approach*, Westview, Boulder, CO, (1980).
276. J.D. Clarkson and T.C. Cochran, eds., *War as a Social Institution*, Colombia University Press, New York, (1941).
277. S. Melman, *The Permanent War Economy*, Simon and Schuster, (1974). Morgan
278. H. Mejcher, *Imperial Quest for Oil: Iraq, 1910-1928*, Ithaca Books, London, (1976).
279. D. Hiro, *The Longest War: The Iran-Iraq Military Conflict*, Routledge, New York, (1991).
280. M. Klare, *Bush-Cheney Energy Strategy: Procuring the Rest of the World's Oil*, Foreign Policy in Focus, (Interhemispheric Resource Center/Institute for Policy Studies/SEEN), Washington DC and Silver City NM, January, (2004).
281. J. Fitchett and D. Ignatius, *Lengthy Elf Inquiry Nears Explosive Finish*, International Herald Tribune, February 1, (2002).

282. T. Rajamoorthy, *Deceit and Duplicity: Some Reflections on Western Intervention in Iraq*, Third World Resurgence, March-April, (2003).
283. P. Knightley and C. Simpson, *The Secret Lives of Lawrence of Arabia*, Nelson, London, (1969).
284. G. Lenczowski, *The Middle East in World Affairs*, Cornell University Press, (1962).
285. D. Rose, *Bush and Blair Made Secret Pact for Iraq War*, Observer, April 4, (2004).
286. B. Gellman, *Allied Air War Struck Broadly in Iraq; Officials Acknowledge Strategy Went Beyond Purely Military Targets*, Washington Post, June 23, (1991).
287. M. Fletcher and M. Theodoulou, *Baker Says Sanctions Must Stay as Long as Saddam Holds Power*, Times, May 23, (1991).
288. J. Pienaar and L. Doyle, *UK Maintains Tough Line on Sanctions Against Iraq*, Independent, May 11, (1991).
289. B. Blum (translator), *Ex-National Security Chief Brzezinski Admits: Afghan Islamism Was Made in Washington*, Nouvel Observateur, January 15, (1998).
290. G. Vidal, *Dreaming War: Blood for Oil and the Bush-Cheney Junta*, Thunder's Mouth Press, (2002).
291. H. Thomas, *Preventive War Sets Serious Precedent*, Seattle Post-Intelligencer, March 20, (2003).
292. C. Johnson, *The Sorrows of Empire: Militarism, Secrecy, and the End of the Republic*, Henry Hold and Company, New York, (2004).
293. C. Johnson, *Blowback: The Costs and Consequences of American Empire*, Henry Hold and Company, New York, (2000).
294. M. Parenti, *Against Empire: The Brutal Realities of U.S. Global Domination*, City Lights Books, 261 Columbus Avenue, San Francisco, CA94133, (1995).
295. E. Ahmad, *Confronting Empire*, South End Press, (2000).
296. W. Greider, *Fortress America*, Public Affairs Press, (1998).
297. J. Pilger, *Hidden Agendas*, The New Press, (1998).
298. S.R. Shalom, *Imperial Alibis*, South End Press, (1993).
299. C. Boggs (editor), *Masters of War: Militarism and Blowback in the Era of American Empire*, Routledge, (2003).
300. J. Pilger, *The New Rulers of the World*, Verso, (2002).
301. G. Vidal, *Perpetual War for Perpetual Peace: How We Got To Be So Hated*, Thunder's Mouth Press, (2002).
302. W. Blum, *Rogue State: A Guide to the World's Only Superpower*, Common Courage Press, (2000).
303. M. Parenti, *The Sword and the Dollar*, St. Martin's Press, 175 Fifth Avenue, New York, NY 10010, (1989).
304. T. Bodenheimer and R. Gould, *Rollback: Right-wing Power in U.S. Foreign Policy*, South End Press, (1989).
305. G. Guma, *Uneasy Empire: Repression, Globalization, and What We Can Do*, Toward Freedom, (2003).
306. W. Blum, *A Brief History of U.S. Interventions: 1945 to the Present*, Z magazine, June, (1999).

307. W. Blum, *Killing Hope: U.S. Military and CIA Intervention Since World War II*
308. J.M. Cypher, *The Iron Triangle: The New Military Buildup*, Dollars and Sense magazine, January/February, (2002).
309. L. Meyer, *The Power of One*, (World Press Review), Reforma, Mexico City, August 5, (1999).
310. C. Johnson, *Time to Bring the Troops Home*, The Nation magazine, May 14, (2001).
311. W. Hartung, F. Berrigan and M. Ciarrocca, *Operation Endless Deployment: The War With Iraq Is Part of a Larger Plan for Global Military Dominance*, The Nation magazine, October 21, (2002).
312. C. Johnson, *The Sorrows of Empire: Militarism, Secrecy, and the End of the Republic*, Henry Hold and Company, New York, (2004).
313. C. Johnson, *Blowback: The Costs and Consequences of American Empire*, Henry Hold and Company, New York, (2000).
314. I. Ramonet, *Servile States*, Le Monde diplomatique, Paris, October (2002), World Press Review, December, (2002).
315. J.K. Galbraith, *The Unbearable Costs of Empire*, American Prospect magazine, November, (2002).
316. G. Monbiot, *The Logic of Empire*, The Guardian, August 6, (2002), World Press Review, October, (2002).
317. W.R. Pitt and S. Ritter, *War on Iraq*, Context Books
318. W.R. Pitt, *The Greatest Sedition is Silence*, Pluto Press, (2003).
319. J. Wilson, *Republic or Empire?*, The Nation magazine, March 3, (2003).
320. R. Dreyfuss, *Just the Beginning: Is Iraq the Opening Salvo in a War to Remake the World?*, The American Prospect magazine, April, (2003).
321. D. Moberg, *The Road From Baghdad: The Bush Team Has Big Plans For the 21st Century. Can the Rest of the World Stop Them?*, These Times magazine, May, (2003).
322. J.M. Blair, *The Control of Oil*, Random House, New York, (1976).
323. R.S. Foot, S.N. MacFarlane and M. Mastanduno, *US Hegemony and International Organizations: The United States and Multilateral Institutions*, Oxford University Press, (2003).
324. P. Bennis and N. Chomsky, *Before and After: US Foreign Policy and the September 11th Crisis*, Olive Branch Press, (2002).
325. J. Garrison, *America as Empire: Global Leader or Rouge Power?*, Berrett-Koehler Publishers, (2004).
326. A.J. Bacevich, *American Empire: The Realities and Consequences of US Diplomacy*, Harvard University Press, (2002).
327. D.R. Francis, *Hidden Defense Costs Add Up to Double Trouble*, Christian Science Monator, February 23, (2004).
328. A. Sampson, *The Seven Sisters: The Great Oil Companies of the World and How They Were Made*, Hodder and Staughton, London, (1988).
329. D. Yergin, *The Prize*, Simon and Schuster, New York, (1991).
330. E. Abrahamian, *Iran Between Two Revolutions*, Princeton University Press, Princeton, (1982).

Chapter 3

RACISM, COLONIALISM AND EXCEPTIONALISM

3.1 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



Figure 3.1: The atrocities they 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.

or abducting people, who were often killed and buried in unmarked graves.”

3.2 Modern weapons and colonialism

In the 18th and 19th centuries, the continually accelerating development of science and science-based industry began to affect the whole world. As the factories of Europe poured out cheap manufactured goods, a change took place in the patterns of world trade: Before the Industrial Revolution, trade routes to Asia had brought Asian spices, textiles and luxury goods to Europe. For example, cotton cloth and fine textiles, woven in India, were imported to England. With the invention of spinning and weaving machines, the trade was reversed. Cheap cotton cloth, manufactured in England, began to be sold in India, and the Indian textile industry withered, just as the hand-loom industry in England itself had done a century before.

The rapid development of technology in the west also opened an enormous gap in military strength between the industrialized nations and the rest of the world. Taking advantage of their superior weaponry, the advanced industrial nations rapidly carved the

remainder of the world into colonies, which acted as sources of raw materials and food, and as markets for manufactured goods.

Throughout the American continent, the native Indian population had proved vulnerable to European diseases, such as smallpox, and large numbers of them had died. The remaining Indians were driven westward by streams of immigrants arriving from Europe.

Often the industrialized nations made their will felt by means of naval bombardments: In 1854, Commodore Perry forced Japan to accept foreign traders by threatening to bombard Tokyo. In 1856, British warships bombarded Canton in China to punish acts of violence against Europeans living in the city. In 1864, a force of European and American warships bombarded Choshu in Japan, causing a revolution. In 1882, Alexandria was bombarded, and in 1896, Zanzibar.

Much that was beautiful and valuable was lost, as mature traditional cultures collapsed, overcome by the power and temptations of modern industrial civilization. For the Europeans and Americans of the late 19th century and early 20th century, progress was a religion, and imperialism was its crusade.

Between 1800 and 1875, the percentage of the earth's surface under European rule increased from 35 percent to 67 percent. In the period between 1875 and 1914, there was a new wave of colonial expansion, and the fraction of the earth's surface under the domination of colonial powers (Europe, the United States and Japan) increased to 85 percent, if former colonies are included. The unequal (and unfair) contest between the industrialized countries, armed with modern weapons, and the traditional cultures with their much more primitive arms, was summarized by the English poet Hilaire Belloc in a sardonic couplet:¹

Whatever happens, we have got
The Maxim gun, and they have not.

During the period between 1880 and 1914, British industrial and colonial dominance began to be challenged. Industrialism had spread from Britain to Belgium, Germany and the United States, and, to a lesser extent, to France, Italy, Russia and Japan. By 1914, Germany was producing twice as much steel as Britain, and the United States was producing four times as much.

New techniques in weaponry were introduced, and a naval armaments race began among the major industrial powers. The English found that their old navy was obsolete, and they had to rebuild. Thus, the period of colonial expansion between 1880 and 1914 was filled with tensions, as the industrial powers raced to arm themselves in competition with each other, and raced to seize as much as possible of the rest of the world. Industrial and colonial rivalry contributed to the outbreak of the First World War, to which the Second World War can be seen as a sequel.

¹The Maxim gun was one of the world's first automatic machine guns. It was invented in the United States in 1884 by Hiram S. Maxim. The explorer and colonialist Henry Morton Stanley (1841-1904) was extremely enthusiastic about Maxim's machine gun, and during a visit to the inventor he tried firing it, demonstrating that it really could fire 600 rounds per minute. Stanley commented that the machine gun would be "a valuable tool in helping civilization to overcome barbarism".



With the founding of the United Nations at the end of the Second World War, a system of international law was set up to replace the rule of military force. Law is a mechanism for equality. Under law, the weak and the powerful are in principle equal. One of the basic purposes of the United Nations is to make war illegal, and if war is illegal, the powerful and weak are on equal footing, much to the chagrin of the powerful. How can one can one construct or maintain an empire if war is not allowed? It is only natural that powerful nations should be opposed to international law, since it is a curb on their power. However, despite opposition, the United Nations has been largely successful in ending the era of colonialism, perhaps because of the balance of power between East and West during the Cold War. One by one, former colonies have regained their independence.

3.3 Persistent effects of colonialism

Part of the extreme economic inequality that exists in today's world is due to colonial and neocolonial wars.

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.

3.4 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”.²

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.

3.5 The Kaiser’s genocide

A book entitled *The Kaiser’s Holocaust: Germany’s Forgotten Genocide and the Colonial Roots of Nazism*, by David Olusoga and Caspar W. Erichsen describes Germany’s involvement in an African genocide. Here is Amazon’s synopsis of the book: “On 12 May 1883, the German flag was raised on the coast of South-West Africa, modern Namibia - the beginnings of Germany’s African Empire. As colonial forces moved in, their ruthless punitive raids became an open war of extermination. Thousands of the indigenous people were killed or driven out into the desert to die. By 1905, the survivors were interned in concentration camps, and systematically starved and worked to death. Years later, the people and ideas that drove the ethnic cleansing of German South West Africa would influence the formation of the Nazi Party. The Kaiser’s Holocaust uncovers extraordinary links between the two regimes: their ideologies, personnel, even symbols and uniform. The Herero and Nama genocide was deliberately concealed for almost a century. Today, as the graves of the victims are uncovered, its re-emergence challenges the belief that Nazism was an aberration in European history. The Kaiser’s Holocaust passionately narrates this harrowing story and explores one of the defining episodes of the twentieth century from a new angle. Moving, powerful and unforgettable, it is a story that needs to be told.”

3.6 The racism of Cecil Rhodes

Cecil Rhodes, who was born in Bishop’s Stortford in Hertfordshire, came to South Africa in the late 1800s and made his fortune in the country’s diamond mines before moving into

²<https://www.youtube.com/watch?v=efl6T8lovqY>
<https://www.youtube.com/watch?v=IdBDRbjx9jo>
<https://www.youtube.com/watch?v=oCJHJWaNl-g>

politics. He served as prime minister of the Cape Colony and later founded the southern African territory of Rhodesia, which would later become independent Zimbabwe. He was the architect of South Africa's notorious apartheid system, and a rabid advocate of British imperialism. Social Darwinism and the eugenics movement may have contributed to the racism and imperialism of Cecil Rhodes.

In a December 2015 article in *The Telegraph*, Dalia Gebrial wrote: "Cecil Rhodes was a man responsible for untold, unending devastation and violence. An architect of South African apartheid, he explicitly believed in the existence of an Anglo-Saxon master race - an ideology that drove him to not only steal approximately one [square] million miles of South African land, but to facilitate the deaths of hundreds of thousands of black South Africans.

"His establishment of a paramilitary private army, the British South Africa Company's Police (BSACP) resulted in the systematic murder of approximately 60,000 people; his amendment of the Masters and Servants Act (1890) reintroduced conditions of torture for black labourers; his infamous racist 'land grabs' set up a system in which the unlawful and illegitimate acquisition of land through armed force was routine.

"In 1887 he told the House of Assembly in Cape Town: 'The native is to be treated as a child and denied the franchise. We must adopt a system of despotism in our relations with the barbarians of South Africa.' His 1892 Franchise and Ballot Act effectively eliminated African voting rights. He repeatedly reminded his colleagues of the 'extreme caution' they must exercise when it comes to 'granting the franchise to coloured people.

Rhodes wanted to create an international movement to extend British influence. He once said: "Why should we not form a secret society with but one object, the furtherance of the British Empire and the bringing of the whole world under British rule, for the recovery of the United States, for making the Anglo-Saxon race but one Empire?"

Rhodes did, in fact, establish this secret society, and it remains very influential today. According to G. Edward Griffin³, "Financed by Nathan Rothschild and the Bank of England, he [Rhodes] established a monopoly over the diamond output of South Africa and most of the gold as well. He formed a secret society which included many of the top leaders of British government. Their elitist goal was nothing less than world domination and the establishment of a modern feudal society controlled by themselves through the world's central banks. In America, the Council on Foreign Relations (CFR) was an outgrowth of that group."

3.7 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.

³in his book, *The Creature from Jekyll Island*



Figure 3.2: Native Americans protesting against the Dakota Access Pipeline.

Pipeline protests by Native Americans

As a recent example of the way in which we respond to our “older brothers” when they urge us to behave in an environmentally responsible manner, we can consider the pipeline protests at Standing Rock. Wikipedia describe these protests as follows:

“On September 3, 2016, during Labor Day weekend, the Dakota Access Pipeline brought in a private security firm when the company used bulldozers to dig up part of the pipeline route that contained possible Native graves and burial artifacts; it was subject to a pending injunction motion. The bulldozers arrived within a day after the tribe filed legal action. Energy Transfer bulldozers cut a two-mile (3200 m) long, 150-foot (45 m) wide path through the contested area.

“When unarmed protesters crossed the perimeter fence to stop the bulldozers, the guards used pepper spray and guard dogs to attack. At least six protesters were treated for dog bites, and an estimated 30 were pepper-sprayed before the guards and their dogs left the scene in trucks. A woman that had taken part in the incident stated, ‘The cops watched the whole thing from up on the hills. It felt like they were trying to provoke us into being violent when we’re peaceful.’ The incident was filmed by Amy Goodman and a crew from Democracy Now! Footage shows several people with dog bites and a dog with blood on its muzzle.

“Some protesters who were arrested for misdemeanors and taken to the Morton County jail reported what they considered harsh and unusual treatment. Sara Jumping Eagle, a physician on the Standing Rock Sioux Reservation, was required to remove all of her clothing and ‘squat and cough’ when she was arrested for disorderly conduct. In another such case, LaDonna Brave Bull Allard, who founded Sacred Stone Camp, said that when her daughter was arrested and taken into custody she was ‘strip-searched in front of multiple male officers, then left for hours in her cell, naked and freezing.’ Cody Hall from Cheyenne River Reservation in South Dakota also reported being strip-searched. He was held for

four days without bail or bond and then charged with two misdemeanors.”

because of public indignation, construction of the pipeline was halted in December, 2016. However, on February 7, 2017, newly-elected Donald Trump authorized the Army Corps of Engineers to proceed, ending its environmental impact assessment and the associated public comment period. The director of the Indigenous Environmental Network released a statement saying: “The granting of an easement, without any environmental review or tribal consultation, is not the end of this fight - it is the new beginning. Expect mass resistance far beyond what Trump has seen so far.”

3.8 *Imperialism, A Study*, by John A. Hobson

In its article about Hobson’s book, Wikipedia states that

“*Imperialism: A Study* (1902), by John A. Hobson, is a politico-economic discourse about the negative financial, economic, and moral aspects of imperialism as a nationalistic business enterprise. Hobson argues that capitalist business activity brought about imperialism.

“Hobson states that what he called the ‘taproot of imperialism’ is not in nationalist pride, but in capitalist oligarchy; and, as a form of economic organization, imperialism is unnecessary and immoral, the result of the mis-distribution of wealth in a capitalist society. He argues that the so-called dysfunction of the political economy created the socio-cultural desire to extend the national markets into foreign lands, in search of profits greater than those available in the Mother Country. In the capitalist economy, rich capitalists received a disproportionately higher income than did the working class. He argues that if the owners invested their incomes to their factories, the greatly increased productive capacity would exceed the growth in demand for the products and services of said factories

“When productive capacity grew faster than consumer demand, there was very soon an excess of this capacity (relative to consumer demand), and, hence, there were few profitable domestic investment outlets. Foreign investment was the only answer. But, insofar as the same problem existed in every industrialized capitalist country, such foreign investment was possible only if non-capitalist countries could be ‘civilized’, ‘Christianized’, and ‘uplifted’ - that is, if their traditional institutions could be forcefully destroyed, and the people coercively brought under the domain of the ‘invisible hand’ of market capitalism. So, imperialism was the only answer.”

Some suggestions for further reading

1. E.J. Hobsbawm, *The Age of Empire, 1875-1914*, Vintage Books, (1989).
2. L. James, *The Rise and Fall of the British Empire*, St Martin’s Press, (1997).

3. N. Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, Basic Books, (2003).
4. S. Schama, *The Fate of Empire, 1776-2000*, Miramax, (2002).
5. A.P. Thorton, *The Imperial Idea and Its Enemies: A Study in British Power*, Palgrave Macmillan, (1985).
6. H. Mejcher, *Imperial Quest for Oil: Iraq, 1910-1928*, Ithaca Books, London, (1976).
7. P. Sluglett, *Britain in Iraq, 1914-1932*, Ithaca Press, London, (1976).
8. D.E. Omissi, *British Air Power and Colonial Control in Iraq, 1920-1925*, Manchester University Press, Manchester, (1990).
9. V.G. Kiernan, *Colonial Empires and Armies, 1815-1960*, Sutton, Stroud, (1998).
10. R. Solh, *Britain's 2 Wars With Iraq*, Ithaca Press, Reading, (1996).
11. D. Hiro, *The Longest War: The Iran-Iraq Military Conflict*, Routledge, New York, (1991).
12. T.E. Lawrence, *A Report on Mesopotamia by T.E. Lawrence*, Sunday Times, August 22, (1920).
13. D. Fromkin, *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*, Owl Books, (2001).
14. T. Rajamoorthy, *Deceit and Duplicity: Some Reflections on Western Intervention in Iraq*, Third World Resurgence, March-April, (2003).
15. P. Knightley and C. Simpson, *The Secret Lives of Lawrence of Arabia*, Nelson, London, (1969).
16. G. Lenczowski, *The Middle East in World Affairs*, Cornell University Press, (1962).
17. John A. Hobson, *Imperialism; A Study*, (1902).
18. P. Cain and T. Hopkins, *British Imperialism, 1688-200*, Longman, (2000).
19. N. Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, Basic Books, (2003).
20. G. Kolko, *Another Century of War*, New Press, (2002).
21. G. Kolko, *Confronting the Third World: United States Foreign Policy, 1945-1980*, Pantheon Books, (1988).
22. M.T. Klare, *Resource Wars: The New Landscape of Global Conflict*, Owl Books reprint edition, New York, (2002).

Chapter 4

RESOURCE WARS

4.1 Adam Smith's invisible hand is at our throats

As everyone knows, Adam Smith invented the theory that individual self-interest is, and ought to be, the main motivating force of human economic activity, and that this, in effect, serves the wider social interest. He put forward a detailed description of this concept in an immense book, “The Wealth of Nations” (1776).

Adam Smith (1723-1790) had been Professor of Logic at the University of Glasgow, but in 1764 he withdrew from his position at the university to become the tutor of the young Duke of Buccleuch. In those days a Grand Tour of Europe was considered to be an important part of the education of a young nobleman, and Smith accompanied Buccleuch to the Continent. To while away the occasional dull intervals of the tour, Adam Smith began to write an enormous book on economics which he finally completed twelve years later. He began his “Inquiry into the Nature and Causes of the Wealth of Nations” by praising division of labor. As an example of its benefits, he cited a pin factory, where ten men, each a specialist in his own set of operations, could produce 48,000 pins in a day. In the most complex civilizations, Smith stated, division of labor has the greatest utility.

The second factor in prosperity, Adam Smith maintained, is a competitive market, free from monopolies and entirely free from governmental interference. In such a system, he tells us, the natural forces of competition are able to organize even the most complex economic operations, and are able also to maximize productivity. He expressed this idea in the following words:

“As every individual, therefore, endeavors as much as he can, both to employ his capital in support of domestic industry, and so to direct that industry that its produce may be of greatest value, each individual necessarily labours to render the annual revenue of the Society as great as he can.”

“He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of greatest value, he intends only his own gain; and he is in this, as in

many other cases, led by an invisible hand to promote an end that was no part of his intention. Nor is it always the worse for Society that it was no part of it. By pursuing his own interest, he frequently promotes that of Society more effectively than when he really intends to promote it.”

In other words, Smith maintained that self-interest (even greed) is a sufficient guide to human economic actions. The passage of time has shown that he was right in many respects. The free market, which he advocated, has turned out to be the optimum prescription for economic growth. However, history has also shown that there is something horribly wrong or incomplete about the idea that individual self-interest alone, uninfluenced by ethical and ecological considerations, and totally free from governmental intervention, can be the main motivating force of a happy and just society. There has also proved to be something terribly wrong with the concept of unlimited economic growth. Here is what actually happened:

In pre-industrial Europe, peasant farmers held a low but nevertheless secure position, protected by a web of traditional rights and duties. Their low dirt-floored and thatched cottages were humble but safe refuges. If a peasant owned a cow, it could be pastured on common land.

With the invention of the steam engine and the introduction of spinning and weaving machines towards the end of the 18th Century, the pattern changed, at first in England, and afterwards in other European countries. Land-owners in Scotland and Northern England realized that sheep were more profitable to have on the land than “crofters” (i.e., small tenant farmers), and families that had farmed land for generations were violently driven from their homes with almost no warning. The cottages were afterwards burned to prevent the return of their owners.

The following account of the Highland Clearances has been left by Donald McLeod, a crofter in the district of Sutherland: “The consternation and confusion were extreme. Little or no time was given for the removal of persons or property; the people striving to remove the sick or helpless before the fire should reach them; next struggling to save the most valuable of their effects. The cries of the women and children; the roaring of the affrighted cattle, hunted at the same time by the yelling dogs of the shepherds amid the smoke and fire, altogether presented a scene that completely baffles description - it required to be seen to be believed... The conflagration lasted for six days, until the whole of the dwellings were reduced to ashes and smoking ruins.”

Between 1750 and 1860, the English Parliament passed a large number of “Enclosure Acts”, abolishing the rights of small farmers to pasture their animals on common land that was not under cultivation. The fabric of traditional rights and duties that once had protected the lives of small tenant farmers was torn to pieces. Driven from the land, poor families flocked to the towns and cities, hoping for employment in the textile mills that seemed to be springing up everywhere.

According to the new rules by which industrial society began to be governed, traditions were forgotten and replaced by purely economic laws. Labor was viewed as a commodity, like coal or grain, and wages were paid according to the laws of supply and demand, without regard for the needs of the workers. Wages fell to starvation levels, hours of work increased,



Figure 4.1: A watercolor painting by Vincent van Gogh showing wives of Belgian miners carrying bags of coal.



Figure 4.2: London during the industrial revolution

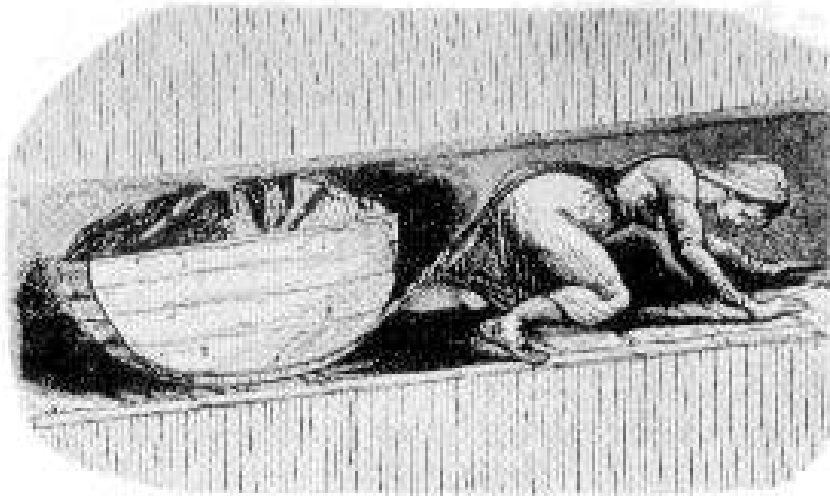


Figure 4.3: **A girl pulling a coaltub through the narrow space left by removal of coal from a seam.**

and working conditions deteriorated.

John Fielden's book, "The Curse of the Factory System" was written in 1836, and it describes the condition of young children working in the cotton mills. "The small nimble fingers of children being by far the most in request, the custom instantly sprang up of procuring 'apprentices' from the different parish workhouses of London, Birmingham and elsewhere... Overseers were appointed to see to the works, whose interest it was to work the children to the utmost, because their pay was in proportion to the quantity of pay that they could exact."

"Cruelty was, of course, the consequence; and there is abundant evidence on record to show that in many of the manufacturing districts, the most heart-rending cruelties were practiced on the unoffending and friendless creatures... that they were flogged, fettered and tortured in the most exquisite refinements of cruelty, that they were in many cases starved to the bone while flogged to their work, and that they were even in some instances driven to commit suicide... The profits of manufacture were enormous, but this only whetted the appetite that it should have satisfied."

Dr. Peter Gaskell, writing in 1833, described the condition of the English mill workers as follows: "The vast deterioration in personal form which has been brought about in the manufacturing population during the last thirty years... is singularly impressive, and fills the mind with contemplations of a very painful character... Their complexion is sallow and pallid, with a peculiar flatness of feature caused by the want of a proper quantity of adipose substance to cushion out the cheeks. Their stature is low - the average height of men being five feet, six inches... Great numbers of the girls and women walk lamely or awkwardly... Many of the men have but little beard, and that in patches of a few hairs... (They have) a spiritless and dejected air, a sprawling and wide action of the legs..."

"Rising at or before daybreak, between four and five o'clock the year round, they



Figure 4.4: **Child laborers during the early Industrial Revolution**

swallow a hasty meal or hurry to the mill without taking any food whatever... At twelve o'clock the engine stops, and an hour is given for dinner... Again they are closely immured from one o'clock till eight or nine, with the exception of twenty minutes, this being allowed for tea. During the whole of this long period, they are actively and unremittingly engaged in a crowded room at an elevated temperature."

Dr. Gaskell described the housing of the workers as follows: "One of the circumstances in which they are especially defective is that of drainage and water-closets. Whole ranges of these houses are either totally undrained, or very partially... The whole of the washings and filth from these consequently are thrown into the front or back street, which, often being unpaved and cut into deep ruts, allows them to collect into stinking and stagnant pools; while fifty, or even more than that number, having only a single convenience common

to them all, it is in a very short time choked with excrementous matter. No alternative is left to the inhabitants but adding this to the already defiled street.”

“It frequently happens that one tenement is held by several families... The demoralizing effects of this utter absence of domestic privacy must be seen before they can be thoroughly appreciated. By laying bare all the wants and actions of the sexes, it strips them of outward regard for decency - modesty is annihilated - the father and the mother, the brother and the sister, the male and female lodger, do not scruple to commit acts in front of each other which even the savage keeps hid from his fellows.”

The landowners of Scotland were unquestionably following self-interest as they burned the cottages of their crofters; and self-interest motivated overseers as they whipped half-starved child workers in England’s mills. Adam Smith’s “invisible hand” no doubt guided their actions in such a way as to maximize production. But whether a happy and just society was created in this way is questionable. Certainly it was a society with large areas of unhappiness and injustice. Self-interest alone was not enough. A society following purely economic laws - a society where selfishness is exalted as the mainspring for action - lacks both the ethical and ecological dimensions needed for social justice, widespread happiness, and sustainability.

4.2 Our greed-based economic system today

Today our greed-based, war addicted, and growth-obsessed economic system poses even greater threats than it did during the early phases of the Industrial Revolution. Today it threatens to destroy human civilization and much of the biosphere.

According to a recently-published study by Oxfam, just 1 percent of the world’s population controls nearly half of the planet’s wealth. The study says that this tiny slice of humanity controls 110 trillion US dollars, or 65 times the total wealth of the poorest 3.5 billion people. The world’s 85 richest people own as much as the poorest 50 percent of humanity. 70 percent of the world’s people live in a country where income inequality has increased in the past three decades.

This shocking disparity in wealth has led to the decay of democracy in many countries, because the very rich have used their money to control governments, and also to control the mass media and hence to control public opinion. The actions of many governments today tend not to reflect what is good for the people (or more crucially, what is good for the future of our planet), but rather what is good for special interest groups, for example, the fossil fuel industry and the military-industrial complex.

Today the world spends roughly 1,700,000,000,000 US dollars on armaments, almost 2 trillion. This vast river of money, almost too great to be imagined, flows into the pockets of arms manufacturers, and is used by them to control governments, which in turn vote for bloated military budgets and aggressive foreign policies which provoke the endless crises and conflicts that are necessary to justify the diversion of such vast sums of money from urgently-needed social goals into the bottomless pit of war.

The reelection of the slave-like politicians is ensured by the huge sums made available



Figure 4.5: **An oxymoron: The vultures of greed never protect the dove of peace.**

for their campaigns by the military-industrial complex. This pernicious circular flow of money, driving endless crises, has sometimes been called “The Devil’s Dynamo”. Thus the world is continually driven to the brink of thermonuclear war by highly dangerous interventions such as the recent ones in North Africa, the Middle East, Ukraine, South and Central America, and the Korean Peninsula.

It is doubtful that any of the political or military figures involved with this arrogant risking of human lives and the human future have any imaginative idea of what a thermonuclear war would be like. In fact it would be an ecological catastrophe of huge proportions, making large areas of the world permanently uninhabitable through long-lived radioactive contamination. The damage to global agriculture would be so great as to produce famine leading to a billion or more deaths from starvation. All the nations of the earth would suffer, neutrals as well as belligerents.

Besides supporting the appalling war machine, our bought-and-paid-for politicians also fail to take the actions that would be needed to prevent the worst effects of climate change. The owners of the fossil fuel industries have even mounted advertising campaigns to convince the public that the threat of anthropogenic climate change is not real. Sadly, the threat of catastrophic climate change is all too real, as 99 percent the worlds climate scientists have warned.

The world has recently passed a dangerous landmark in atmospheric CO₂ concentration, 400 ppm. The last time that the earth experienced such high concentrations of this

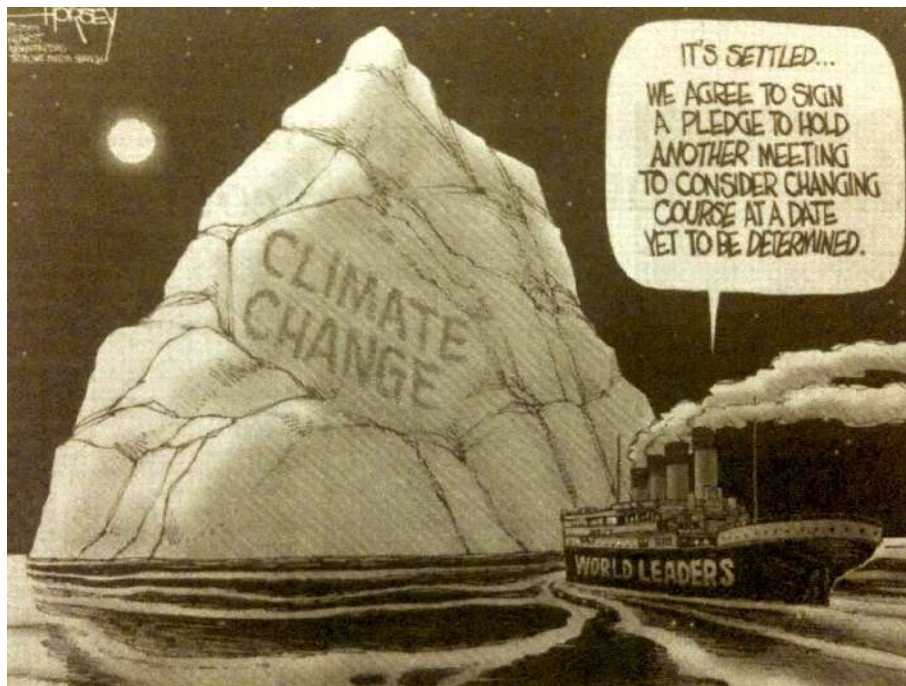


Figure 4.6: The ship in the cartoon is drawn so as to resemble the Titanic.

greenhouse gas were several million years ago. At that time the Arctic was free from ice, and sea levels were 40 meters higher than they are today. Global warming is a slow and long-term effect, so such high sea levels will be slow in arriving, but ultimately we must expect that coastal cities and much of the world's low-lying land will be under water. We must also expect many tropical regions of the world to become uninhabitable because of high temperatures. Finally there is a threat of famine because agriculture will be hit by high temperatures and aridity.

There are several very dangerous feedback loops that may cause the earth's temperatures to rise much faster than has been predicted by the International Panel on Climate Change. By far the most dangerous of these comes from the melting of methane hydrate crystals that are currently trapped in frozen tundra and on the floor of seabeds.

At high pressures, methane combines with water to form crystals called hydrates or clathrates. These crystals are stable at the temperatures currently existing on ocean floors, but whenever the water temperature rises sufficiently, the crystals become unstable and methane gas bubbles to the surface. This effect has already been observed in the Arctic seas north of Russia. The total amount of methane clathrates on ocean floors is not precisely known, but it is estimated to be very large indeed, corresponding to between 3,000 and 11,000 gigatons of carbon. The release of even a small fraction of this amount of methane into our atmosphere would greatly accelerate rising temperatures, leading to the release of still more methane, in a highly dangerous feedback loop. We must at all costs avoid global temperatures which will cause this feedback loop to trigger in earnest.

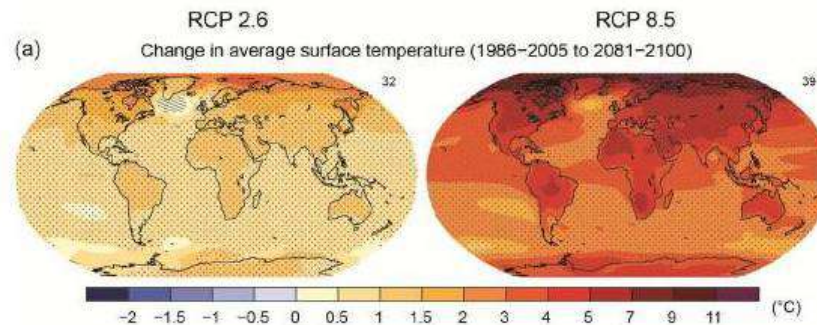


Figure 4.7: Temperature changes will be greatest in the polar regions. Far greater changes in global temperatures are to be expected in the 22nd and 23rd centuries and in subsequent centuries, because the thermal inertia of the oceans makes climate change a very slow and long-term effect.

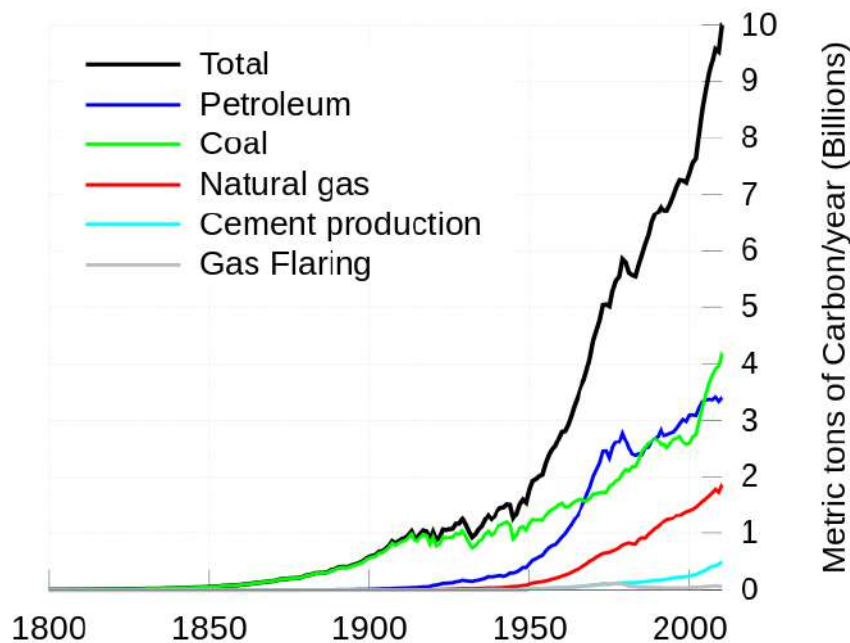


Figure 4.8: The isotope ratios in ice cores from the Greenland ice sheet allow us to see the close correlation between atmospheric CO₂ concentration and temperatures over a very long period of time. Thus regardless of questions of cause and effect, we can expect rising concentrations of CO₂ to be accompanied by rising temperatures. As we can see from the graphs, the rate of increase in carbon emissions has shown no sign of slowing in recent years.

4.3 Human motivations were not always so selfish

For the reasons mentioned above, we can see that an economic system where selfishness and greed are exalted as the mainspring for human actions lacks both a social conscience and an ecological conscience. Both these dimensions are needed for the long-term survival of human civilization and the biosphere.

We must remember, however, that the worship of the free market and the exaltation of selfishness are relatively recent developments in human history. During most of their million-year history, humans lived in small groups, not in great cities or nations, and sharing was part of their lifestyle. Perhaps that lifestyle is the one to which we should return if we wish the human future to stretch out for another million years.

4.4 Neocolonialism

In his book, “Neocolonialism, The Last Stage of Imperialism” (Thomas Nielsen, London, 1965), Kwamai Nkrumah defined neocolonialism with the following words: “The essence of neocolonialism is that the State which is subject to it is, in theory, independent, and has all the outward trappings of international sovereignty. In reality its economic system and thus its political policy is directed from the outside. The methods and form of this direction can take various shapes. For example, in an extreme case, the troops of the imperial power may garrison the territory of the neocolonial State and control the government of it. More often, however, neocolonial control is exercised through monetary means...”

“The struggle against neocolonialism is not aimed at excluding the capital of the developed world from operating in less developed countries. It is aimed at preventing the financial power of the developed countries from being used in such a way as to impoverish the less developed.”

4.5 The resource curse

The way in which the industrialized countries maintain their control over less developed nations can be illustrated by the “resource curse”, i.e. the fact that resource-rich developing countries are no better off economically than those that lack resources, but are cursed with corrupt and undemocratic governments. This is because foreign corporations extracting local resources under unfair agreements exist in a symbiotic relationship with corrupt local officials.

One might think that taxation of foreign resource-extracting firms would provide developing countries with large incomes. However, there is at present no international law governing multinational tax arrangements. These are usually agreed to on a bilateral basis, and the industrialized countries have stronger bargaining powers in arranging the bilateral agreements.

4.6 Confessions of an economic hit-man

1

A book by John Perkins, “Confessions of an Economic Hit-Man”, can give us an idea of the way in which our 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 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.”

¹<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>



4.7 Debt slavery

At the moment, the issue of debt slavery is in the news because of the predicament of Greece and the intended fate of Ukraine, but the problem is a very general one.

If any quantity, for example indebtedness, is growing at the rate of 7% per year, the doubling time is only 9.9 years. At higher rates of interest, the doubling time is still less. If a debt remains unpaid for so long that it more than doubles, most of the repayments will go for interest, rather than for reducing the amount of the debt.

In the case of the debts of third world countries to private banks in the industrialized parts of the world and to the IMF, many of the debts were incurred in the 1970's for purposes which were of no benefit to local populations, for example purchase of military hardware. Today the debts remain, although the amount paid over the years by the developing countries is very many times the amount originally borrowed.

Third world debt can be regarded as a means by which the industrialized nations extract raw materials from developing countries without any repayment whatever. In fact, besides extracting raw materials, they extract money. The injustice of this arrangement was emphasized recently by Pope Francis in his wonderful encyclical *Laudato Si'*.²

Dr. Michael Klare holds the post of Five Colleges Professor of Peace and World Security Studies at Hampshire College, Amherst College, Smith College, Mount Holyoke College, and the University of Massachusetts Amherst. He has written 16 books exploring the relationship between natural resources and war.³

Like Naomi Klein, Prof. Klare believes that the peace movement and the climate movement ought to join forces.⁴

4.8 Blood for oil

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.”

²<http://dissidentvoice.org/2015/07/a-revolutionary-pope-calls-for-rethinking-the-outdated-criteria-that-rule-the-world/>

<http://www.globalissues.org/issue/28/third-world-debt-undermines-development>

³<https://www.youtube.com/watch?v=PCXgnbTdhNo>

<https://www.youtube.com/watch?v=S-cdHIGFrF0>

<https://www.youtube.com/watch?v=LIdlm4ywAlc>

<https://www.youtube.com/watch?v=PCXgnbTdhNo>

<https://www.youtube.com/watch?v=S-cdHIGFrF0>

⁴<https://www.youtube.com/watch?v=LIdlm4ywAlc>

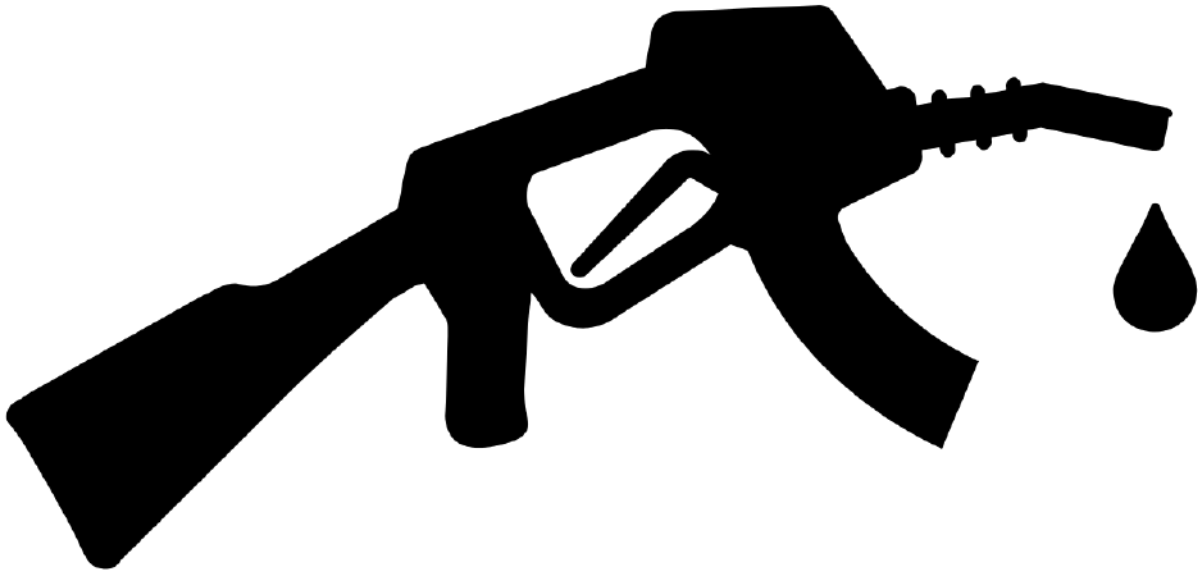


Figure 4.9: **Blood for oil.**

“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 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".

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.

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 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 a 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



Figure 4.10: **Donald Rumsfeld and his good friend, Saddam.**

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.

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."

On the morning of September 11, 2001, two hijacked airliners were deliberately crashed into New York's World Trade Center, causing the collapse of three skyscrapers and the deaths of more than three thousand people. Almost simultaneously, another hijacked airliner was driven into the Pentagon in Washington DC, and a fourth hijacked plane crashed in a field in Pennsylvania. The fourth plane probably was to have made a suicide attack on the White House or the Capitol, but passengers on the airliner became aware what was happening through their mobile telephones, and they overpowered the hijackers.

Blame for the September 11 attacks soon centered on the wealthy Saudi Arabian Islamic extremist, Osama bin Laden, and on his terrorist organization, al-Qaeda. In a later statement acknowledging responsibility for the terrorist attacks, bin Laden gave as his main reasons firstly the massive US support for Israel, a country that, in his view, was committing atrocities against the Palestinians, and secondly the presence of US troops in Saudi Arabia.

Like Saddam Hussein, Osama bin Laden was an ex-protegé of the CIA, by whom he had previously been armed, trained, and supported. The history of bin Laden's relationship with the CIA began in 1979, when the CIA, acting through Pakistan's Inter-Services Intel-

ligence Agency, began to train and arm the Mujaheddin, an international force of Islamic fundamentalists who were encouraged to attack Afghanistan's secular socialist government.

US National Security Advisor Zbigniew Bryzinski anticipated that the Soviets would respond by sending troops to protect the socialist government of Afghanistan, and he believed that the resulting war would be the Soviet Union's version of Viet Nam: It would be a war that would fatally weaken the Soviet Union. Thus he saw the war that he was provoking in Afghanistan as an important step in the liberation of Eastern Europe. "What is most important in the history of the world?", Polish-born Bryzinski asked in a 1998 interview, "The Taliban, or the collapse of the Soviet empire? Some stirred-up Muslims, or the liberation of central Europe...?" It was, in fact, these same "stirred-up Muslims" who guided two hijacked aircraft into the Twin Towers on September 11, 2001.

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.

Looking at the present and threatened conflicts in the Middle East against the background of this history, must we not ask: To what extent are they too about oil?

**"Whatever happens, we have got
The Maxim gun, and they have not."**

Hilaire Beloc

4.9 Excessive inequality maintained by military force

The excessive inequality that we can see today, both within countries and between countries, has many harmful effects, and these are experienced by both poor and rich. For example, crime, drug use, and mental illness are much more common in very unequal societies.

On a global scale, the vast chasm of economic inequality between countries blocks efforts to make the United Nations more effective, since rich countries fear that a more effective UN will rob them of their privileged position.

We must also remember that inequality between nations is often maintained by means of military force, regime-change, and interference by powerful nations in the internal affairs of weaker ones.

4.10 Oxfam's report on inequality

A recent report by Oxfam⁵ has revealed that the wealth of the poorest half of the world's population has fallen by a trillion dollars since 2010, a drop of 38%. Meanwhile, the wealth of the richest 62 people in the world has increased to 1.76 trillion dollars. In fact, the wealthiest 62 individuals now own more than the poorest half of the world's population. Enormous contrasts exist today, not only between nations, but also within nations.

Winnie Byanyima, Oxfam's International Executive Director stated that "It is simply unacceptable that the poorest half of the world's population owns no more than a few dozen super-rich people who could fit onto one bus. World leaders' concern about the escalating inequality has so far not translated into concrete action; the world has become a much more unequal place, and the trend is accelerating. We cannot continue to allow hundreds of millions of people to go hungry while resources that could be used to help them are sucked up by those at the top."

Speaking at the Davos Forum in Switzerland, she continued: "I challenge the governments and elites at Davos to play their part in ending the era of tax havens, which is fueling economic inequality and preventing hundreds of millions of people from lifting themselves out of poverty. Multinational companies and wealthy elites are playing by different rules than everyone else, refusing to pay the taxes that society needs to function. The fact that 188 of 201 leading companies have a presence in at least one tax haven shows that it is time to act."

Oxfam estimates that globally, 7.6 trillion dollars of individual's wealth sits offshore, and this includes as much as 38% of African financial wealth.

⁵<https://www.oxfam.org/en/research/economy-1>

4.11 Persistent effects of colonialism

Part of the extreme economic inequality that exists in today's world is due to colonial and neocolonial wars.

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.

Neocolonialism?

In his book, *Neocolonialism, The Last Stage of Imperialism* (Thomas Nielsen, London, 1965), Kwami Nkrumah defined neocolonialism with the following words: "The essence of neocolonialism is that the State which is subject to it is, in theory independent, and has all the outward trappings of international sovereignty. In reality its economic system and thus its political policy is directed from the outside. The methods and form of this direction can take various shapes. For example, in an extreme case, the troops of the imperial power may garrison the territory of the neocolonial State and control the government of it. More often, however, neocolonial control is exercised through monetary means... The struggle against neocolonialism is not aimed at excluding the capital of the developed world from operating in less developed countries. It is aimed at preventing the financial power of the developed countries from being used in such a way as to impoverish the less developed."



Figure 4.11: A late 19th century French cartoon showing England, Germany, Russia, France and Japan slicing up the pie of China. (Public domain)



Figure 4.12: A cartoon showing Cecil Rhodes' colonial ambitions for Africa. The thread in his hands represents a proposed Cape-Town-to-Cairo telegraph line. He wanted to "paint the map British red", and declared, "If I could, I would annex other planets." (Public domain)

4.12 Historical conflicts related to water

Here are some excerpts from a very large list given on the following website:

<http://www.worldwater.org/conflict/list/>

- 1938, China floods Yellow River to defend from Japan: Chiang Kai-shek orders the destruction of flood-control dikes of the Huayuankou, Henan section of the Huang He (Yellow) River, in order to flood areas threatened by the Japanese army. West of Kaifeng, dikes are destroyed with dynamite, spilling water across the flat plain. Even though the flood destroys part of the invading army and mires its equipment in mud, Wuhan, the headquarters of the Nationalist government is taken by the Japanese in October. Floodwaters cover an area variously estimated as between 3,000 and 50,000 square kilometers, and kill Chinese estimated in numbers between “tens of thousands” and “one million.”
- 1941-1943, WWII damages Soviet’s hydroelectric dams: World War II inflicts enormous harm to hydroelectricity systems in the Soviet Union. Over two-thirds of the hydroelectric power stations are lost.
- 1947-1960s, Indus divided between India and Pakistan: Partition leaves Indus basin divided between India and Pakistan; disputes over irrigation water ensue, during which India stems flow of water into irrigation canals in Pakistan. Indus Waters Agreement reached in 1960 after 12 years of World Bank-led negotiations.
- 1951, Israel and Syria fight over Yarmouk River: Jordan makes public its plans to irrigate the Jordan Valley by tapping the Yarmouk River; Israel responds by commencing drainage of the Huleh swamps located in the demilitarized zone between Israel and Syria; border skirmishes ensue between Israel and Syria.
- 1962-1967, Brazil and Paraguay clash over Paraná River: Negotiations between Brazil and Paraguay over the development of the Paraná River are interrupted by a unilateral show of military force by Brazil in 1962, which invades the area and claims control over the Guadalupe Falls site. Military forces are withdrawn in 1967 following an agreement for a joint commission to examine development in the region.
- 1975, Iraq, Syria mobilize troops over drought tensions: As upstream dams are filled during a low-flow year on the Euphrates, Iraqis claim that flow reaching its territory is “intolerable” and asks the Arab League to intervene. Syrians claim they are receiving less than half the river’s normal flow and pull out of an Arab League technical committee formed



to mediate the conflict. In May Syria closes its airspace to Iraqi flights and both Syrian and Iraq reportedly transfer troops to their mutual border. Saudi Arabia successfully mediates the conflict.

- 1978 onwards, Egypt threatens Ethiopia over Nile plans: Long standing tensions over the Nile, especially the Blue Nile, originate in Ethiopia. Ethiopia's proposed construction of dams on the headwaters of the Blue Nile leads Egypt to repeatedly declare the vital importance of water. "The only matter that could take Egypt to war again is water" (Anwar Sadat, 1979). "The next war in our region will be over the waters of the Nile, not politics" (Boutros Boutros-Ghali, 1988).
- 1990-1991, Attacks on energy systems in Iraq leaves cities without water: During the Gulf War, targeted attacks on transformers and turbines at water treatment plants leave whole cities, such as Basra, without water or wastewater treatment. And due to embargos, parts needed to fix the plants are not available. It is estimated that at least 25% of water treatment plants in Iraq do not have backup power supply and are inoperable after electrical grids are damaged. Human Rights Watch 1991
- 1991-2001, US sanctions against Iraq target water systems: United States deliberately pursues policy of destroying Iraq's water systems through sanctions and withholding contracts.



**WATER
WARS**





4.13 Conflicts over water in the Middle East

Here are some quotations from an article by Sagatom Saha entitled *How climate change could exacerbate conflicts in the Middle East*⁶

“Global warming will do the Middle East no favors. Evidence abounds it will be the region that climate change will hit hardest. Summer temperatures across the region are expected to increase more than twice the global average. Prolonged heat waves, desertification, and droughts will make parts of the Middle East and North Africa uninhabitable. Where Middle Easterners will still be able to live, climate change may fuel violent competition over diminishing resources. Even though some degree of warming is inevitable, governments in the region and their international partners have done little to integrate climate change to their strategies to mitigate instability and conflict. Instead, they should brace themselves for a Middle East in which warming intensifies unrest, weakens state capacity, and provokes resource conflicts.

“For an early example of warming’s damaging power, look no further than Syria. Climate change caused the generational drought that preceded the ongoing civil war there. That drought drove rural farmers into urban centers like Damascus and Aleppo, priming the populace for concentrated, large-scale political unrest. From 2002 to 2010, the country’s total urban population increased by 50 percent. While climate change certainly did not compel Bashar Al-Assad to brutally crack down on his own people, it did prompt a confrontation that might not have occurred. Climate-induced economic despair and migration worked to reinforce other salient conflict drivers including Assad’s “privatization” efforts and concentration of power that exaggerated inequality and severed the dictator’s connection to rural, recently migrated communities. As climate change causes rapid temperature increases, food shortages, and economic pain elsewhere, more Middle Eastern countries might tip over into bloodshed.

“Climate-induced water shortages will be another source of conflict. When the Islamic State controlled large swathes of territory across Iraq and Syria, it wrested control of dams that provided drinking water, electricity, and irrigation to millions along the Tigris and Euphrates rivers. Ensuing clashes with Kurdish and Iraqi forces left Shiite holy cities like Karbala and Najaf without water. More than 23 million live in the river basin, and experts predict that, because of global warming, the Tigris and Euphrates will “disappear this century,” making conflict over what remains even more tempting if contested political control returns to the Fertile Crescent.

“Further, climate change will likely make Middle Eastern governments less

⁶<https://www.atlanticcouncil.org/blogs/menasource/how-climate-change-could-exacerbate-conflict-in-the-middle-east/>

capable of handling unrest. First, more frequent weather events will surely put a drag on resource delivery and create new emergency relief needs. In the Middle East where foreign assistance is often critical, donors may have to work double time to continue to fund stabilization and governance projects while also providing more humanitarian disaster aid.

“Second, oil producers will have fewer resources as oil receipts contract amid the inevitable global clean energy transition that will accompany climate action. Take the fact that worsening climate change is already driving a global transition toward clean energy. In November 2018, even while pursuing close cooperation with the Organization of Petroleum Exporting Countries (OPEC), Russian President Vladimir Putin openly declared that “\$70 suits us completely,” referring to an ideal oil price for his country. Unlike his Middle Eastern partners, Putin seems to acknowledge that OPEC oil will face market competition from renewables and US shale if it reaches too high a price.

“In countries where the social contract rests upon limited political freedom in exchange for subsidies and extravagant public works, there will be less money to go around, and it cannot be expected to go as far. Such is the case in Algeria, where street demonstrations have forced the country’s ailing leader, Abdelaziz Bouteflika, to step down. Protesters’ grievances are, in part, tied to the oil, which funded social benefits that buoyed youth employment until prices crashed.

“While countries like Saudi Arabia have the financial capacity to likely weather the storm, worry should be aimed squarely at unstable oil producers like Iraq and Libya, which require extraordinarily oil prices to fund budgets. It is true that oil is a valuable, concentrated resource that factions compete for in the region, but it may be a necessary source of reconstruction funding once conflict abates. In the best case, foreign assistance continues to come from western governments like the United States that still rely on the global flow of oil to some degree. In the worst case, donor governments abdicate their support as the mass deployment of wind turbines, solar panels, and electric vehicles become more feasible and affordable. The consequences could be locking in the fragility of the region’s current conflict zones: Even though Libyan militias fight to control oil infrastructure now, it is hard to imagine the country funding its own reconstruction in the future unless oil returns to a higher price.

“Climate change might also have the Middle East’s governments warier of their neighbors. Resource scarcity within a country can provoke nationwide unrest, but competition over transboundary resources can elevate even higher to bellicose levels. Knowing that water will become scarcer, it is instructive to understand how Middle Eastern neighbors are already handling disputes over water needed for irrigation, drinking, and hydropower production.

“The Nile River Basin provides one worrying example. Since 2011, Ethiopia has been constructing its Grand Renaissance Dam in a bid to become a regional

electricity exporter. However, the dam will slash downstream flow to Egypt by 25 percent. Cairo alleges that the dam will interrupt water supplies to its nearly 100 million people. While Ethiopia and Egypt are currently in negotiations, Egyptian officials have been caught considering military action over the dispute as recently as 2013. The current Egyptian president Abdel Fattah el-Sisi has openly declared the dam “a matter of life and death,” highlighting its continued importance. Climate change, which threatens to disrupt the Nile’s flows, stands to make an already tense situation worse.

“Admittedly, direct conflict between Middle Eastern countries has become rarer, but proxy wars are common, featuring in nearly all the region’s civil wars. Water has already featured in at least one of them: Historically, Damascus has leveraged support for the Kurdistan Workers Party (PKK), a group loathed by Istanbul, to force Turkey to share Euphrates waters to Syria. Nearly every country in the Middle East from Morocco to Iran share water resources with a neighbor, and some have little freshwater of their own. What has played out between Egypt and Sudan and between Turkey and Syria could become a frequent feature of Middle Eastern politics as water becomes even more scarce.”

4.14 Concluding remarks

From the discussion presented above, we can see that our present economic system produces an endless series of resource-motivated wars. In addition to the enormous suffering, waste, injustice and ecological destruction produced by modern wars, we must recognize that in an era of thermonuclear weapons, war has become prohibitively dangerous. Therefore we need a new economic system.

Suggestions for further reading

1. P.B. Smith, J.D. Schilling and A.P. Haines, *Introduction and Summary*, in *Draft Report of the Pugwash Study Group: The World at the Crossroads*, Berlin, (1992).
2. World Resources Institute, *World Resources*, Oxford University Press, New York, (published annually).
3. J.R. Craig, D.J. Vaughan and B.J. Skinner, *Resources of the Earth: Origin, Use and Environmental Impact, Third Edition*, Prentice Hall, (2001).
4. W. Youngquist, *Ge destinies: The Inevitable Control of Earth Resources Over Nations and Individuals*, National Book Company, Portland Oregon, (1997).
5. M. Tanzer, *The Race for Resources. Continuing Struggles Over Minerals and Fuels*, Monthly Review Press, New York, (1980).
6. C.B. Reed, *Fuels, Minerals and Human Survival*, Ann Arbor Science Publishers Inc., Ann Arbor Michigan, (1975).

7. A.A. Bartlett, *Forgotten Fundamentals of the Energy Crisis*, American Journal of Physics, **46**, 876-888, (1978).
8. N. Gall, *We are Living Off Our Capital*, Forbes, September, (1986).
9. E.J. Hobsbawn, *The Age of Empire, 1875-1914*, Vintage Books, (1989).
10. L. James, *The Rise and Fall of the British Empire*, St Martin's Press, (1997).
11. N. Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, Basic Books, (2003).
12. S. Schama, *The Fate of Empire, 1776-2000*, Miramax, (2002).
13. A.P. Thorton, *The Imperial Idea and Its Enemies: A Study in British Power*, Palgrave Macmillan, (1985).
14. H. Mejcher, *Imperial Quest for Oil: Iraq, 1910-1928*, Ithaca Books, London, (1976).
15. P. Sluglett, *Britain in Iraq, 1914-1932*, Ithaca Press, London, (1976).
16. D.E. Omissi, *British Air Power and Colonial Control in Iraq, 1920-1925*, Manchester University Press, Manchester, (1990).
17. V.G. Kiernan, *Colonial Empires and Armies, 1815-1960*, Sutton, Stroud, (1998).
18. R. Solh, *Britain's 2 Wars With Iraq*, Ithaca Press, Reading, (1996).
19. D. Hiro, *The Longest War: The Iran-Iraq Military Conflict*, Routledge, New York, (1991).
20. T.E. Lawrence, *A Report on Mesopotamia by T.E. Lawrence*, Sunday Times, August 22, (1920).
21. D. Fromkin, *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*, Owl Books, (2001).
22. T. Rajamoorthy, *Deceit and Duplicity: Some Reflections on Western Intervention in Iraq*, Third World Resurgence, March-April, (2003).
23. P. Knightley and C. Simpson, *The Secret Lives of Lawrence of Arabia*, Nelson, London, (1969).
24. G. Lenczowski, *The Middle East in World Affairs*, Cornell University Press, (1962).
25. John A. Hobson, *Imperialism; A Study*, (1902).
26. P. Cain and T. Hopkins, *British Imperialism, 1688-200*, Longman, (2000).
27. N. Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, Basic Books, (2003).
28. G. Kolko, *Another Century of War*, New Press, (2002).
29. G. Kolko, *Confronting the Third World: United States Foreign Policy, 1945-1980*, Pantheon Books, (1988).
30. M.T. Klare, *Resource Wars: The New Landscape of Global Conflict*, Owl Books reprint edition, New York, (2002).
31. Y. Nakash, *The Shi'is of Iraq*, Princeton University Press, (1994).
32. D. Fromkin, *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*, Owl Books, (2001).
33. S.K. Aburish, *Saddam Hussein: The Politics of Revenge*, Bloomsbury, London, (2001).
34. M. Muffti, *Sovereign Creations: Pan-Arabism and Political Order in Syria and Iraq*, Cornell University Press, (1996).

35. C. Clover, *Lessons of the 1920 Revolt Lost on Bremer*, Financial Times, November 17, (2003).
36. J. Kifner, *Britain Tried First. Iraq Was No Picnic Then*, New York Times, July 20, (2003).
37. J. Feffer, B. Egrenreich and M.T. Klare, *Power Trip: US Unilateralism and Global Strategy After September 11*, Seven Stories Press, (2003).
38. J.D. Rockefeller, *Random Reminiscences of Men and Events*, Doubleday, New York, (1909).
39. M.B. Stoff, *Oil, War and American Security: The Search for a National Policy on Oil, 1941-1947*, Yale University Press, New Haven, (1980).
40. W.D. Muscable, *George F. Kennan and the Making of American Foreign Policy*, Princeton University Press, Princeton, (1992).
41. J. Stork, *Middle East Oil and the Energy Crisis*, Monthly Review, New York, (1976).
42. F. Benn, *Oil Diplomacy in the Twentieth Century*, St. Martin's Press, New York, (1986).
43. R. Sale, *Saddam Key in Early CIA Plot*, United Press International, April 10, (2003).
44. K. Roosevelt, *Countercoup: The Struggle for the Control of Iran*, McGraw-Hill, New York, (1979).
45. J. Fitchett and D. Ignatius, *Lengthy Elf Inquiry Nears Explosive Finish*, International Herald Tribune, February 1, (2002).
46. M.T. Klare, *Resource Wars: The New Landscape of Global Conflict*, Owl Books reprint edition, New York, (2002).
47. M. Klare, *Bush-Cheney Energy Strategy: Procuring the Rest of the World's Oil*, Foreign Policy in Focus, (Interhemispheric Resource Center/Institute for Policy Studies/SEEN), Washington DC and Silver City NM, January, (2004).
48. M. Klare, *Endless Military Superiority*, The Nation magazine, July 15, (2002).
49. M.T. Klare, *Geopolitics Reborn: The Global Struggle Over Oil and Gas Pipelines*, Current History, December issue, 428-33, (2004).
50. P. Grose, *Allen Dulles: The Life of a Gentleman Spy*, Houghton Mifflin, Boston, (1994).
51. S. Warren, *Exxon's Profit Surged in 4th Quarter*, Wall Street Journal, February 12, (2004).
52. R. Suskind, *The Price of Loyalty: George W. Bush, the White House and the Education of Paul O'Neill*, Simon and Schuster, New York, (2004).
53. D. Morgan and D.B. Ottaway, *In Iraqi War Scenario, Oil is Key Issue as U.S. Drillers Eye Huge petroleum Pool*, Washington Post, September 15, (2002).
54. D. Rose, *Bush and Blair Made Secret Pact for Iraqi War*, The Observer, April 4, (2004).
55. E. Vulliamy, P. Webster and N.P. Walsh, *Scramble to Carve Up Iraqi Oil Reserves Lies Behind US Diplomacy*, The Observer, October 6, (2002).
56. Y. Ibrahim, *Bush's Iraq Adventure is Bound to Backfire*, International Herald Tribune, November 1, (2002).

57. P. Beaumont and F. Islam, *Carve-Up of Oil Riches Begins*, The Observer, November 3, (2002).
58. M. Dobbs, *US Had Key Role in Iraq Buildup*, Washington Post, December 30, (2002).
59. R. Sale, *Saddam Key in Early CIA Plot*, United Press International, April 10, (2003).
60. R. Morris, *A Tyrant Forty Years in the Making*, New York Times, March 14, (2003).
61. H. Batatu, *The Old Social Classes and the Revolutionary Movements of Iraq*, Princeton University Press, (1978).
62. D.W. Riegel, Jr., and A.M. D'Amato, *US Chemical and Biological Warfare-Related Dual Use Exports to Iraq and their Possible Impact on the Health Consequences of the Persian Gulf War*, Report to US Senate ("The Riegel Report"), May 25, (1994).
63. P.E. Tyler, *Officers Say US Aided Iraq in War Despite Use of Gas*, New York Times, August 18, (2002).
64. D. Priest, *Rumsfeld Visited Baghdad in 1984 to Reassure Iraqis, Documents Show*, Washington Post, December 19, (2003).
65. S. Zunes, *Saddam's Arrest Raises Troubling Questions*, Foreign Policy in Focus, <http://www.globalpolicy.org/>, December (2003).
66. D. Leigh and J. Hooper, *Britain's Dirty Secret*, Guardian, March 6, (2003).
67. J. Battle, (Ed.), *Shaking Hands With Saddam Hussein: The US Tilts Towards Iraq, 1980-1984*, National Security Archive Electronic Briefing Book No. 82, February 25, (2003).
68. J.R. Hiltermann, *America Didn't Seem to Mind Poison Gas*, International Herald Tribune, January 17, (2003).
69. D. Hiro, *Iraq and Poison Gas*, Nation, August 28, (2002).
70. T. Weiner, *Iraq Uses Techniques in Spying Against its Former Tutor, the US*, Philadelphia Inquirer, February 5, (1991).
71. S. Hussein and A. Glaspie, *Excerpts From Iraqi Document on Meeting with US Envoy*, The New York Times, International, September 23, (1990).
72. D. Omissi, *Baghdad and British Bombers*, Guardian, January 19, (1991).
73. D. Vernet, *Postmodern Imperialism*, Le Monde, April 24, (2003).
74. J. Buchan, *Miss Bell's Lines in the Sand*, Guardian, March 12, (2003).
75. C. Tripp, *Iraq: The Imperial Precedent*, Le Monde Diplomatique, January, (2003).
76. G.H.W. Bush and B. Scowcroft, *Why We Didn't Remove Saddam*, Time, 2 March, (1998).
77. J.A. Baker III, *The Politics of Diplomacy: Revolution, War and Peace, 1989-1992*, G.P. Putnam's Sons, New York, (1995).
78. H. Thomas, *Preventive War Sets Serious Precedent*, Seattle Post Intelligencer, March 20, (2003).
79. R.J. Barnet, *Intervention and Revolution: The United States in the Third World*, World Publishing, (1968).
80. T. Bodenheimer and R. Gould, *Rollback: Right-wing Power in U.S. Foreign Policy*, South End Press, (1989).
81. G. Guma, *Uneasy Empire: Repression, Globalization, and What We Can Do, Toward Freedom*, (2003).

82. W. Blum, *A Brief History of U.S. Interventions: 1945 to the Present*, Z magazine, June, (1999).
83. W. Blum, *Killing Hope: U.S. Military and CIA Intervention Since World War II*
84. J.M. Cypher, *The Iron Triangle: The New Military Buildup*, Dollars and Sense magazine, January/February, (2002).
85. L. Meyer, *The Power of One*, (World Press Review), Reforma, Mexico City, August 5, (1999).
86. W. Hartung, F. Berrigan and M. Ciarrocca, *Operation Endless Deployment: The War With Iraq Is Part of a Larger Plan for Global Military Dominance*, The Nation magazine, October 21, (2002).
87. I. Ramonet, *Servile States*, Le Monde diplomatique, Fromkin Paris, October (2002), World Press Review, December, (2002).
88. J.K. Galbraith, *The Unbearable Costs of Empire*, American Prospect magazine, November, (2002).
89. G. Monbiot, *The Logic of Empire*, The Guardian, August 6, (2002), World Press Review, October, (2002).
90. W.R. Pitt, *The Greatest Sedition is Silence*, Pluto Press, (2003).
91. J. Wilson, *Republic or Empire?*, The Nation magazine, March 3, (2003).
92. W.B. Gallie, *Understanding War: Points of Conflict*, Routledge, London, (1991).
93. R. Falk and S.S. Kim, eds., *The War System: An Interdisciplinary Approach*, Westview, Boulder, CO, (1980).
94. J.D. Clarkson and T.C. Cochran, eds., *War as a Social Institution*, Colombia University Press, New York, (1941).
95. S. Melman, *The Permanent War Economy*, Simon and Schuster, (1974). Morgan
96. H. Mejcher, *Imperial Quest for Oil: Iraq, 1910-1928*, Ithaca Books, London, (1976).
97. D. Hiro, *The Longest War: The Iran-Iraq Military Conflict*, Routledge, New York, (1991).
98. M. Klare, *Bush-Cheney Energy Strategy: Procuring the Rest of the World's Oil*, Foreign Policy in Focus, (Interhemispheric Resource Center/Institute for Policy Studies/SEEN), Washington DC and Silver City NM, January, (2004).
99. J. Fitchett and D. Ignatius, *Lengthy Elf Inquiry Nears Explosive Finish*, International Herald Tribune, February 1, (2002).
100. T. Rajamoorthy, *Deceit and Duplicity: Some Reflections on Western Intervention in Iraq*, Third World Resurgence, March-April, (2003).
101. P. Knightley and C. Simpson, *The Secret Lives of Lawrence of Arabia*, Nelson, London, (1969).
102. G. Lenczowski, *The Middle East in World Affairs*, Cornell University Press, (1962).
103. D. Rose, *Bush and Blair Made Secret Pact for Iraq War*, Observer, April 4, (2004).
104. B. Gellman, *Allied Air War Struck Broadly in Iraq; Officials Acknowledge Strategy Went Beyond Purely Military Targets*, Washington Post, June 23, (1991).
105. M. Fletcher and M. Theodoulou, *Baker Says Sanctions Must Stay as Long as Saddam Holds Power*, Times, May 23, (1991).

106. J. Pienaar and L. Doyle, *UK Maintains Tough Line on Sanctions Against Iraq*, Independent, May 11, (1991).
107. B. Blum (translator), *Ex-National Security Chief Brzezinski Admits: Afghan Islamism Was Made in Washington*, Nouvel Observateur, January 15, (1998).
108. G. Vidal, *Dreaming War: Blood for Oil and the Bush-Cheney Junta*, Thunder's Mouth Press, (2002).
109. H. Thomas, *Preventive War Sets Serious Precedent*, Seattle Post-Intelligencer, March 20, (2003).
110. C. Johnson, *The Sorrows of Empire: Militarism, Secrecy, and the End of the Republic*, Henry Hold and Company, New York, (2004).
111. C. Johnson, *Blowback: The Costs and Consequences of American Empire*, Henry Hold and Company, New York, (2000).
112. M. Parenti, *Against Empire: The Brutal Realities of U.S. Global Domination*, City Lights Books, 261 Columbus Avenue, San Francisco, CA94133, (1995).
113. E. Ahmad, *Confronting Empire*, South End Press, (2000).
114. W. Greider, *Fortress America*, Public Affairs Press, (1998).
115. J. Pilger, *Hidden Agendas*, The New Press, (1998).
116. S.R. Shalom, *Imperial Alibis*, South End Press, (1993).
117. C. Boggs (editor), *Masters of War: Militarism and Blowback in the Era of American Empire*, Routledge, (2003).
118. J. Pilger, *The New Rulers of the World*, Verso, (2002).
119. G. Vidal, *Perpetual War for Perpetual Peace: How We Got To Be So Hated*, Thunder's Mouth Press, (2002).
120. W. Blum, *Rogue State: A Guide to the World's Only Superpower*, Common Courage Press, (2000).
121. M. Parenti, *The Sword and the Dollar*, St. Martin's Press, 175 Fifth Avenue, New York, NY 10010, (1989).
122. T. Bodenheimer and R. Gould, *Rollback: Right-wing Power in U.S. Foreign Policy*, South End Press, (1989).
123. G. Guma, *Uneasy Empire: Repression, Globalization, and What We Can Do*, Toward Freedom, (2003).
124. W. Blum, *A Brief History of U.S. Interventions: 1945 to the Present*, Z magazine, June, (1999).
125. W. Blum, *Killing Hope: U.S. Military and CIA Intervention Since World War II*
126. J.M. Cypher, *The Iron Triangle: The New Military Buildup*, Dollars and Sense magazine, January/February, (2002).
127. L. Meyer, *The Power of One*, (World Press Review), Reforma, Mexico City, August 5, (1999).
128. C. Johnson, *Time to Bring the Troops Home*, The Nation magazine, May 14, (2001).
129. W. Hartung, F. Berrigan and M. Ciarrocca, *Operation Endless Deployment: The War With Iraq Is Part of a Larger Plan for Global Military Dominance*, The Nation magazine, October 21, (2002).

130. C. Johnson, *The Sorrows of Empire: Militarism, Secrecy, and the End of the Republic*, Henry Hold and Company, New York, (2004).
131. C. Johnson, *Blowback: The Costs and Consequences of American Empire*, Henry Hold and Company, New York, (2000).
132. I. Ramonet, *Servile States*, Le Monde diplomatique, Paris, October (2002), World Press Review, December, (2002).
133. J.K. Galbraith, *The Unbearable Costs of Empire*, American Prospect magazine, November, (2002).
134. G. Monbiot, *The Logic of Empire*, The Guardian, August 6, (2002), World Press Review, October, (2002).
135. W.R. Pitt and S. Ritter, *War on Iraq*, Context Books
136. W.R. Pitt, *The Greatest Sedition is Silence*, Pluto Press, (2003).
137. J. Wilson, *Republic or Empire?*, The Nation magazine, March 3, (2003).
138. R. Dreyfuss, *Just the Beginning: Is Iraq the Opening Salvo in a War to Remake the World?*, The American Prospect magazine, April, (2003).
139. D. Moberg, *The Road From Baghdad: The Bush Team Has Big Plans For the 21st Century. Can the Rest of the World Stop Them?*, These Times magazine, May, (2003).
140. J.M. Blair, *The Control of Oil*, Random House, New York, (1976).
141. R.S. Foot, S.N. MacFarlane and M. Mastanduno, *US Hegemony and International Organizations: The United States and Multilateral Institutions*, Oxford University Press, (2003).
142. P. Bennis and N. Chomsky, *Before and After: US Foreign Policy and the September 11th Crisis*, Olive Branch Press, (2002).
143. J. Garrison, *America as Empire: Global Leader or Rouge Power?*, Berrett-Koehler Publishers, (2004).
144. A.J. Bacevich, *American Empire: The Realities and Consequences of US Diplomacy*, Harvard University Press, (2002).
145. D.R. Francis, *Hidden Defense Costs Add Up to Double Trouble*, Christian Science Monator, February 23, (2004).
146. A. Sampson, *The Seven Sisters: The Great Oil Companies of the World and How They Were Made*, Hodder and Staughton, London, (1988).
147. D. Yergin, *The Prize*, Simon and Schuster, New York, (1991).
148. E. Abrahamian, *Iran Between Two Revolutions*, Princeton University Press, Princeton, (1982).
149. W.B. Gallie, *Understanding War: Points of Conflict*, Routledge, London, (1991).
150. R. Falk and S.S. Kim, eds., *The War System: An Interdisciplinary Approach*, Westview, Boulder, CO, (1980).
151. J.D. Clarkson and T.C. Cochran, eds., *War as a Social Institution*, Colombia University Press, New York, (1941).
152. S. Melman, *The Permanent War Economy*, Simon and Schuster, (1974).
153. D. Yergin, *The Prize*, Simon and Schuster, New York, (1991).

154. A. Sampson, *The Seven Sisters: The Great Oil Companies of the World and How They Were Made*, Hodder and Staughton, London, (1988).
155. J.D. Rockefeller, *Random Remaniscences of Men and Events*, Doubleday, New York, (1909).
156. M.B. Stoff, *Oil, War and American Security: The Search for a National Policy on Oil, 1941-1947*, Yale University Press, New Haven, (1980).
157. W.D. Muscable, *George F. Kennan and the Making of American Foreign Policy*, Princeton University Press, Princeton, (1992).
158. J. Stork, *Middle East Oil and the Energy Crisis*, Monthly Review, New York, (1976).
159. F. Benn, *Oil Diplomacy in the Twentieth Century*, St. Martin's Press, New York, (1986).
160. R. Sale, *Saddam Key in Early CIA Plot*, United Press International, April 10, (2003).
161. K. Roosevelt, *Countercoup: The Struggle for the Control of Iran*, McGraw-Hill, New York, (1979).
162. E. Abrahamian, *Iran Between Two Revolutions*, Princeton University Press, Princeton, (1982).
163. J. Fitchett and D. Ignatius, *Lengthy Elf Inquiry Nears Explosive Finish*, International Herald Tribune, February 1, (2002).
164. J.M. Blair, *The Control of Oil*, Random House, New York, (1976).
165. M.T. Klare, *Resource Wars: The New Landscape of Global Conflict*, Owl Books reprint edition, New York, (2002).
166. P. Grose, *Allen Dulles: The Life of a Gentleman Spy*, Houghton Mifflin, Boston, (1994).
167. H. Mejcher, *Imperial Quest for Oil: Iraq, 1910-1928*, Ithaca Books, London, (1976).
168. P. Sluglett, *Britain in Iraq, 1914-1932*, Ithaca Press, London, (1976).
169. D.E. Omissi, *British Air Power and Colonial Control in Iraq, 1920-1925*, Manchester University Press, Manchester, (1990).
170. V.G. Kiernan, *Colonial Empires and Armies, 1815-1960*, Sutton, Stroud, (1998).
171. R. Solh, *Britain's 2 Wars With Iraq*, Ithaca Press, Reading, (1996).
172. D. Hiro, *The Longest War: The Iran-Iraq Military Conflict*, Routledge, New York, (1991).
173. S. Warren, *Exxon's Profit Surged in 4th Quarter*, Wall Street Journal, February 12, (2004).
174. R. Suskind, *The Price of Loyalty: George W. Bush, the White House and the Education of Paul O'Neill*, Simon and Schuster, New York, (2004).
175. D. Morgan and D.B. Ottaway, *In Iraqi War Scenario, Oil is Key Issue as U.S. Drillers Eye Huge Petroleum Pool*, Washington Post, September 15, (2002).
176. D. Rose, *Bush and Blair Made Secret Pact for Iraqi War*, The Observer, April 4, (2004).
177. E. Vulliamy, P. Webster and N.P. Walsh, *Scramble to Carve Up Iraqi Oil Reserves Lies Behind US Diplomacy*, The Observer, October 6, (2002).
178. Y. Ibrahim, *Bush's Iraq Adventure is Bound to Backfire*, International Herald Tribune, November 1, (2002).

179. P. Beaumont and F. Islam, *Carve-Up of Oil Riches Begins*, The Observer, November 3, (2002).
180. C.J. Cleveland, *Physical and Economic Aspects of Natural Resource Scarcity: The Cost of Oil Supply in the Lower 48 United States 1936-1987*, Resources and Energy **13**, 163-188, (1991).
181. C.J. Cleveland, *Yield Per Effort for Additions to Crude Oil Reserves in the Lower 48 States, 1946-1989*, American Association of Petroleum Geologists Bulletin, **76**, 948-958, (1992).
182. M.K. Hubbert, *Technique of Prediction as Applied to the Production of Oil and Gas*, in *NBS Special Publication 631*, US Department of Commerce, National Bureau of Standards, (1982).
183. L.F. Ivanhoe, *Oil Discovery Indices and Projected Discoveries*, Oil and Gas Journal, **11**, 19, (1984).
184. L.F. Ivanhoe, *Future Crude Oil Supplies and Prices*, Oil and Gas Journal, July 25, 111-112, (1988).
185. Energy Information Administration, *International Energy Outlook, 2001*, US Department of Energy, (2001).
186. Energy Information Administration, *Caspian Sea Region*, US Department of Energy, (2001).
187. National Energy Policy Development Group, *National Energy Policy*, The White House, (2004). (<http://www.whitehouse.gov/energy/>)
188. M. Klare, *Bush-Cheney Energy Strategy: Procuring the Rest of the World's Oil*, Foreign Policy in Focus, (Interhemispheric Resource Center/Institute for Policy Studies/SEEN), Washington DC and Silver City NM, January, (2004).
189. M. Dobbs, *US Had Key Role in Iraq Buildup*, Washington Post, December 30, (2002).
190. R. Sale, *Saddam Key in Early CIA Plot*, United Press International, April 10, (2003).
191. R. Morris, *A Tyrant Forty Years in the Making*, New York Times, March 14, (2003).
192. H. Batatu, *The Old Social Classes and the Revolutionary Movements of Iraq*, Princeton University Press, (1978).
193. D.W. Riegel, Jr., and A.M. D'Amato, *US Chemical and Biological Warfare-Related Dual Use Exports to Iraq and their Possible Impact on the Health Consequences of the Persian Gulf War*, Report to US Senate ("The Riegel Report"), May 25, (1994).
194. P.E. Tyler, *Officers Say US Aided Iraq in War Despite Use of Gas*, New York Times, August 18, (2002).
195. D. Priest, *Rumsfeld Visited Baghdad in 1984 to Reassure Iraqis, Documents Show*, Washington Post, December 19, (2003).
196. S. Zunes, *Saddam's Arrest Raises Troubling Questions*, Foreign Policy in Focus, (<http://www.globalpolicy.org/>), December (2003).
197. D. Leigh and J. Hooper, *Britain's Dirty Secret*, Guardian, March 6, (2003).
198. J. Battle, (Ed.), *Shaking Hands With Saddam Hussein: The US Tilts Towards Iraq, 1980-1984*, National Security Archive Electronic Briefing Book No. 82, February 25, (2003).

199. J.R. Hiltermann, *America Didn't Seem to Mind Poison Gas*, International Herald Tribune, January 17, (2003).
200. D. Hiro, *Iraq and Poison Gas*, Nation, August 28, (2002).
201. T. Weiner, *Iraq Uses Techniques in Spying Against its Former Tutor, the US*, Philadelphia Inquirer, February 5, (1991).
202. S. Hussein and A. Glaspie, *Excerpts From Iraqi Document on Meeting with US Envoy*, The New York Times, International, September 23, (1990).
203. T.E. Lawrence, *A Report on Mesopotamia by T.E. Lawrence*, Sunday Times, August 22, (1920).
204. T. Rajamoorthy, *Deceit and Duplicity: Some Reflections on Western Intervention in Iraq*, Third World Resurgence, March-April, (2003).
205. P. Knightley and C. Simpson, *The Secret Lives of Lawrence of Arabia*, Nelson, London, (1969).
206. G. Lenczowski, *The Middle East in World Affairs*, Cornell University Press, (1962).
207. Y. Nakash, *The Shi'is of Iraq*, Princeton University Press, (1994).
208. D. Fromkin, *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*, Owl Books, (2001).
209. S.K. Aburish, *Saddam Hussein: The Politics of Revenge*, Bloomsbury, London, (2001).
210. M. Muffti, *Sovereign Creations: Pan-Arabism and Political Order in Syria and Iraq*, Cornell University Press, (1996).
211. C. Clover, *Lessons of the 1920 Revolt Lost on Bremer*, Financial Times, November 17, (2003).
212. J. Kifner, *Britain Tried First. Iraq Was No Picnic Then*, New York Times, July 20, (2003).
213. D. Omissi, *Baghdad and British Bombers*, Guardian, January 19, (1991).
214. D. Vernet, *Postmodern Imperialism*, Le Monde, April 24, (2003).
215. J. Buchan, *Miss Bell's Lines in the Sand*, Guardian, March 12, (2003).
216. C. Tripp, *Iraq: The Imperial Precedent*, Le Monde Diplomatique, January, (2003).
217. G.H.W. Bush and B. Scowcroft, *Why We Didn't Remove Saddam*, Time, 2 March, (1998).
218. J.A. Baker III, *The Politics of Diplomacy: Revolution, War and Peace, 1989-1992*, G.P. Putnam's Sons, New York, (1995).
219. D. Rose, *Bush and Blair Made Secret Pact for Iraq War*, Observer, April 4, (2004).
220. B. Gellman, *Allied Air War Struck Broadly in Iraq; Officials Acknowledge Strategy Went Beyond Purely Military Targets*, Washington Post, June 23, (1991).
221. M. Fletcher and M. Theodoulou, *Baker Says Sanctions Must Stay as Long as Saddam Holds Power*, Times, May 23, (1991).
222. J. Pienaar and L. Doyle, *UK Maintains Tough Line on Sanctions Against Iraq*, Independent, May 11, (1991).
223. C. Johnson, *America's Empire of Bases*, TomDispatch.com, January, (2004).
224. B. Blum (translator), *Ex-National Security Chief Brzezinski Admits: Afghan Islamism Was Made in Washington*, Nouvel Observateur, January 15, (1998).

225. D. Rose, *Bush and Blair Made Secret Pact for Iraq War*, The Observer, Sunday April 4, (1994).
226. G. Vidal, *Dreaming War: Blood for Oil and the Bush-Cheney Junta*, Thunder's Mouth Press, (2002).
227. H. Thomas, *Preventive War Sets Serious Precedent*, Seattle Post-Intelligencer, March 20, (2003).
228. C. Johnson, *The Sorrows of Empire: Militarism, Secrecy, and the End of the Republic*, Henry Hold and Company, New York, (2004).
229. C. Johnson, *Blowback: The Costs and Consequences of American Empire*, Henry Hold and Company, New York, (2000).
230. M. Parenti, *Against Empire: The Brutal Realities of U.S. Global Domination*, City Lights Books, 261 Columbus Avenue, San Francisco, CA94133, (1995).
231. E. Ahmad, *Confronting Empire*, South End Press, (2000).
232. W. Greider, *Fortress America*, Public Affairs Press, (1998).
233. R. Mahajan, *Full Spectrum Dominance: U.S. Power in Iraq and Beyond*, Seven Stories Press, (2003).
234. J. Pilger, *Hidden Agendas*, The New Press, (1998).
235. S.R. Shalom, *Imperial Alibis*, South End Press, (1993).
236. C. Boggs (editor), *Masters of War: Militarism and Blowback in the Era of American Empire*, Routledge, (2003).
237. J. Pilger, *The New Rulers of the World*, Verso, (2002).
238. G. Vidal, *Perpetual War for Perpetual Peace: How We Got To Be So Hated*, Thunder's Mouth Press, (2002).
239. W. Blum, *Rogue State: A Guide to the World's Only Superpower*, Common Courage Press, (2000).
240. M. Parenti, *The Sword and the Dollar*, St. Martin's Press, 175 Fifth Avenue, New York, NY 10010, (1989).
241. K. Grossman, *Weapons in Space*, Seven Stories Press, (2001).
242. R.J. Barnet, *Intervention and Revolution: The United States in the Third World*, World Publishing, (1968).
243. T. Bodenheimer and R. Gould, *Rollback: Right-wing Power in U.S. Foreign Policy*, South End Press, (1989).
244. G. Guma, *Uneasy Empire: Repression, Globalization, and What We Can Do*, Toward Freedom, (2003).
245. W. Blum, *A Brief History of U.S. Interventions: 1945 to the Present*, Z magazine, June, (1999).
246. W. Blum, *Killing Hope: U.S. Military and CIA Intervention Since World War II*
247. M. Klare, *Endless Military Superiority*, The Nation magazine, July 15, (2002).
248. J.M. Cypher, *The Iron Triangle: The New Military Buildup*, Dollars and Sense magazine, January/February, (2002).
249. L. Meyer, *The Power of One*, (World Press Review), Reforma, Mexico City, August 5, (1999).
250. C. Johnson, *Time to Bring the Troops Home*, The Nation magazine, May 14, (2001).

251. W. Hartung, F. Berrigan and M. Ciarrocca, *Operation Endless Deployment: The War With Iraq Is Part of a Larger Plan for Global Military Dominance*, The Nation magazine, October 21, (2002).
252. I. Ramonet, *Servile States*, Le Monde diplomatique, Paris, October (2002), World Press Review, December, (2002).
253. J.K. Galbraith, *The Unbearable Costs of Empire*, American Prospect magazine, November, (2002).
254. G. Monbiot, *The Logic of Empire*, The Guardian, August 6, (2002), World Press Review, October, (2002).
255. W.R. Pitt and S. Ritter, *War on Iraq*, Context Books
256. W.R. Pitt, *The Greatest Sedition is Silence*, Pluto Press, (2003).
257. J. Wilson, *Republic or Empire?*, The Nation magazine, March 3, (2003).
258. R. Dreyfuss, *Just the Beginning: Is Iraq the Opening Salvo in a War to Remake the World?*, The American Prospect magazine, April, (2003).
259. D. Moberg, *The Road From Baghdad: The Bush Team Has Big Plans For the 21st Century. Can the Rest of the World Stop Them?*, These Times magazine, May, (2003).
260. P. Cain and T. Hopkins, *British Imperialism, 1688-200*, Longman, (2000).
261. N. Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, Basic Books, (2003).
262. E.J. Hobsbawn, *The Age of Empire, 1875-1914*, Vintage Books, (1989).
263. L. James, *The Rise and Fall of the British Empire*, St Martin's Press, (1997).
264. S. Schama, *The Fate of Empire, 1776-2000*, Miramax, (2002).
265. A.P. Thorton, *The Imperial Idea and Its Enemies: A Study in British Power*, Palgrave Macmillan, (1985).
266. G. Kolko, *Another Century of War*, New Press, (2002).
267. G. Kolko, *Confronting the Third World: United States Foreign Policy, 1945-1980*, Pantheon Books, (1988).
268. J. Feffer, B. Egrenreich and M.T. Klare, *Power Trip: US Unilateralism and Global Strategy After September 11*, Seven Stories Press, (2003).
269. R.S. Foot, S.N. MacFarlane and M. Mastanduno, *US Hegemony and International Organizations: The United States and Multilateral Institutions*, Oxford University Press, (2003).
270. P. Bennis and N. Chomsky, *Before and After: US Foreign Policy and the September 11th Crisis*, Olive Branch Press, (2002).
271. J. Garrison, *America as Empire: Global Leader or Rouge Power?*, Berrett-Koehler Publishers, (2004).
272. A.J. Bacevich, *American Empire: The Realities and Consequences of US Diplomacy*, Harvard University Press, (2002).
273. D.R. Francis, *Hidden Defense Costs Add Up to Double Trouble*, Christian Science Monator, February 23, (2004).

Chapter 5

ECOLOGY AND THE VIETNAM WAR

5.1 McNamara's Evil Lives On

Here are some quotations from an article by Robert Sheer entitled *McNamara's Evil Lives On*, published in The Nation on July 8, 2008.¹

Why not speak ill of the dead?

Robert McNamara, who died this week, was a complex man - charming even, in a blustery way, and someone I found quite thoughtful when I interviewed him. In the third act of his life he was often an advocate for enlightened positions on world poverty and the dangers of the nuclear arms race. But whatever his better nature, it was the stark evil he perpetrated as secretary of defense that must indelibly frame our memory of him.

To not speak out fully because of respect for the deceased would be to mock the memory of the millions of innocent people McNamara caused to be maimed and killed in a war that he later freely admitted never made any sense. Much has been made of the fact that he recanted his support for the war, but that came 20 years after the holocaust he visited upon Vietnam was over.

Is holocaust too emotionally charged a word? How many millions of dead innocent civilians does it take to qualify labels like holocaust, genocide or terrorism? How many of the limbless victims of his fragmentation bombs and land mines whom I saw in Vietnam during and after the war? Or are America's leaders always to be exempted from such questions? Perhaps if McNamara had been held legally accountable for his actions, the architects of the Iraq debacle might have paused.

Instead, McNamara was honored with the Medal of Freedom by President Lyndon Johnson, to whom he had written a private memo nine months earlier

¹<https://www.thenation.com/article/archive/mcnamaras-evil-lives/>

offering this assessment of their Vietnam carnage: 'The picture of the world's greatest superpower killing or seriously injuring 1,000 noncombatants a week, while trying to pound a tiny backward nation into submission on an issue whose merits are hotly disputed, is not a pretty one.'

He knew it then, and, give him this, the dimensions of that horror never left him. When I interviewed him for the Los Angeles Times in 1995, after the publication of his confessional memoir, his assessment of the madness he had unleashed was all too clear:

'Look, we dropped three to four times the tonnage on that tiny little area as were dropped by the Allies in all of the theaters in World War II over a period of five years. It was unbelievable. We killed - there were killed - 3,200,000 Vietnamese, excluding the South Vietnamese military. My God! The killing, the tonnage - it was fantastic. The problem was that we were trying to do something that was militarily impossible - we were trying to break the will; I don't think we can break the will by bombing short of genocide.'

We - no, he - couldn't break their will because their fight was for national independence. They had defeated the French and would defeat the Americans who took over when French colonialists gave up the ghost. The war was a lie from the first. It never had anything to do with the freedom of the Vietnamese (we installed one tyrant after another in power), but instead had to do with our irrational cold war obsession with 'international communism.' Irrational, as President Richard Nixon acknowledged when he embraced detente with the Soviet communists, toasted China's fierce communist Mao Tse-tung and then escalated the war against 'communist' Vietnam and neutral Cambodia.

It was always a lie and our leaders knew it, but that did not give them pause. Both Johnson and Nixon make it quite clear on their White House tapes that the mindless killing, McNamara's infamous body count, was about domestic politics and never security.

The lies are clearly revealed in the Pentagon Papers study that McNamara commissioned, but they were made public only through the bravery of Daniel Ellsberg. Yet when Ellsberg, a former Marine who had worked for McNamara in the Pentagon, was in the docket facing the full wrath of Nixon's Justice Department, McNamara would lift not a finger in his defense. Worse, as Ellsberg reminded me this week, McNamara threatened that if subpoenaed to testify at the trial by Ellsberg's defense team, 'I would hurt your client badly.'

Not as badly as those he killed or severely wounded. Not as badly as the almost 59,000 American soldiers killed and the many more horribly hurt. One of them was the writer and activist Ron Kovic, who as a kid from Long Island was seduced by McNamara's lies into volunteering for two tours in Vietnam. Eventually, struggling with his mostly paralyzed body, he spoke out against the war in the hope that others would not have to suffer as he did (and still does). Meanwhile, McNamara maintained his golden silence, even as Richard Nixon managed to kill and maim millions more. What McNamara did was evil

- deeply so.

5.2 The Pentagon Papers

Wikipedia states that:

The Pentagon Papers, officially titled *Report of the Office of the Secretary of Defense Vietnam Task Force*, is a United States Department of Defense history of the United States' political and military involvement in Vietnam from 1945 to 1967. The papers were released by Daniel Ellsberg, who had worked on the study; they were first brought to the attention of the public on the front page of The New York Times in 1971. A 1996 article in The New York Times said that the Pentagon Papers had demonstrated, among other things, that the Johnson Administration 'systematically lied, not only to the public but also to Congress.'

More specifically, the papers revealed that the U.S. had secretly enlarged the scope of its actions in the Vietnam War with the bombings of nearby Cambodia and Laos, coastal raids on North Vietnam, as well as Marine Corps attacks, none of which were reported in the mainstream media. For his disclosure of the Pentagon Papers, Ellsberg was initially charged with conspiracy, espionage, and theft of government property, but the charges were later dismissed after prosecutors investigating the Watergate scandal discovered that the staff members in the Nixon White House had ordered the so-called White House Plumbers to engage in unlawful efforts to discredit Ellsberg...

To ensure the possibility of public debate about the papers' content, on June 29, US Senator Mike Gravel, an Alaska Democrat, entered 4,100 pages of the papers into the record of his Subcommittee on Public Buildings and Grounds. These portions of the papers, which were edited for Gravel by Howard Zinn and Noam Chomsky, were subsequently published by Beacon Press, the publishing arm of the Unitarian Universalist Association of Congregations. A federal grand jury was subsequently empaneled to investigate possible violations of federal law in the release of the report. Leonard Rodberg, a Gravel aide, was subpoenaed to testify about his role in obtaining and arranging for publication of the Pentagon Papers. Gravel asked the court (in *Gravel v. United States*) to quash the subpoena on the basis of the Speech or Debate Clause in Article I, Section 6 of the United States Constitution.

Daniel Ellsberg believed that when U.S. citizens discovered that the Vietnam War was based on lies, the war would end. However, it continued for many more years.



Figure 5.1: Victims of the Mai Lai Massacre.



Figure 5.2: Napalm burn victims during the war being treated at the 67th Combat Support Hospital. 1967-1968 Innocent children become burn victims in the Vietnam War.



Figure 5.3: **Frightened children flee from an air attack in Vietnam.**

5.3 Effects of Agent Orange

Wikipedia states that:

“Up to four million people in Vietnam were exposed to the defoliant. The government of Vietnam says as many as three million people have suffered illness because of Agent Orange,[4] and the Red Cross of Vietnam estimates that up to one million people are disabled or have health problems as a result of Agent Orange contamination. The United States government has described these figures as unreliable, while documenting higher cases of leukemia, Hodgkin’s lymphoma, and various kinds of cancer in exposed US military veterans. An epidemiological study done by the Centers for Disease Control and Prevention showed that there was an increase in the rate of birth defects of the children of military personnel as a result of Agent Orange. Agent Orange has also caused enormous environmental damage in Vietnam. Over 3,100,000 hectares (31,000 km² or 11,969 mi²) of forest were defoliated. Defoliants eroded tree cover and seedling forest stock, making reforestation difficult in numerous areas. Animal species diversity sharply reduced in contrast with unsprayed areas.”



Figure 5.4: Nguyen Xuan Minh lies in a crib at the Tu Du Hospital May 2, 2005 in Ho Chi Minh City, Vietnam.



Figure 5.5: A disabled and malformed victim of foliant Agent Orange, begs on the streets of Saigon to make a living, 1996.

5.4 Bombing of Cambodia and Laos

According to an article by Jessica Pearce Rotondi entitled *Why Laos Has Been Bombed More Than Any Other Country*²,

“The U.S. bombing of Laos (1964-1973) was part of a covert attempt by the CIA to wrest power from the communist Pathet Lao, a group allied with North Vietnam and the Soviet Union during the Vietnam War.

“The officially neutral country became a battleground in the Cold War between the United States and Soviet Union, with American bombers dropping over two million tons of cluster bombs over Laos - more than all the bombs dropped during WWII combined. Today, Laos is the most heavily bombed nation in history. Here are facts about the so-called secret war in Laos.

“Laos is a landlocked country bordered by China and Myanmar to the North, Vietnam to the East, Cambodia to the South and Thailand and the Mekong River to the West.

“Its proximity to Mao Zedong’s China made it critical to Dwight D. Eisenhower’s Domino Theory of keeping communism at bay. ‘If Laos were lost, the rest of Southeast Asia would follow,’ Eisenhower told his National Security Council. On the day of his farewell address in 1961, President Eisenhower approved the CIA’s training of anti-communist forces in the mountains of Laos. Their mission: To disrupt communist supply routes across the Ho Chi Minh Trail to Vietnam.

“Eisenhower’s successors in the White House: John F. Kennedy, Lyndon B. Johnson and Richard Nixon, all approved escalating air support for the guerrilla fighters, but not publicly. The 1962 International Agreement on the Neutrality of Laos, signed by China, the Soviet Union, Vietnam, the United States and 10 other countries, forbid signers from directly invading Laos or establishing military bases there. The secret war in Laos had begun...

“In Laos, the legacy of U.S. bombs continues to wreak havoc. Since 1964, more than 50,000 Lao have been killed or injured by U.S. bombs, 98 percent of them civilians. An estimated 30 percent of the bombs dropped on Laos failed to explode upon impact, and in the years since the bombing ended, 20,000 people have been killed or maimed by the estimated 80 million bombs left behind.”

By 1975, one tenth of the population of Laos had been killed by the bombs, and a quarter of the population were refugees.

²<https://www.history.com/news/laos-most-bombed-country-vietnam-war>

Cambodia

Here are some quotations from an article by Maximilian Wechsler entitled *America's 'Secret War' and the Bombing of Southeast Asia*³:

“On March 18, 1969, USAF Strategic Air Command (SAC) B-52 bombers began carpet bombing Cambodia on the order of President Nixon. The overall covert operation was code-named ‘Operation Menu’, with various phases named ‘Breakfast’, ‘Lunch’, ‘Dinner’, ‘Snack’, ‘Supper’ and ‘Dessert’.

“President Nixon ordered the campaign without consulting Congress and even kept it secret from top military officials. Five members of Congress were informed several months after the start of Operation Menu, but it was kept secret from the American people until The New York Times broke the story in May 1969. Henry Kissinger, President Nixon’s National Security Adviser, was reportedly outraged over the leaked information in the story and ordered the FBI to wiretap the phones of top White House aides and reporters to find the source.

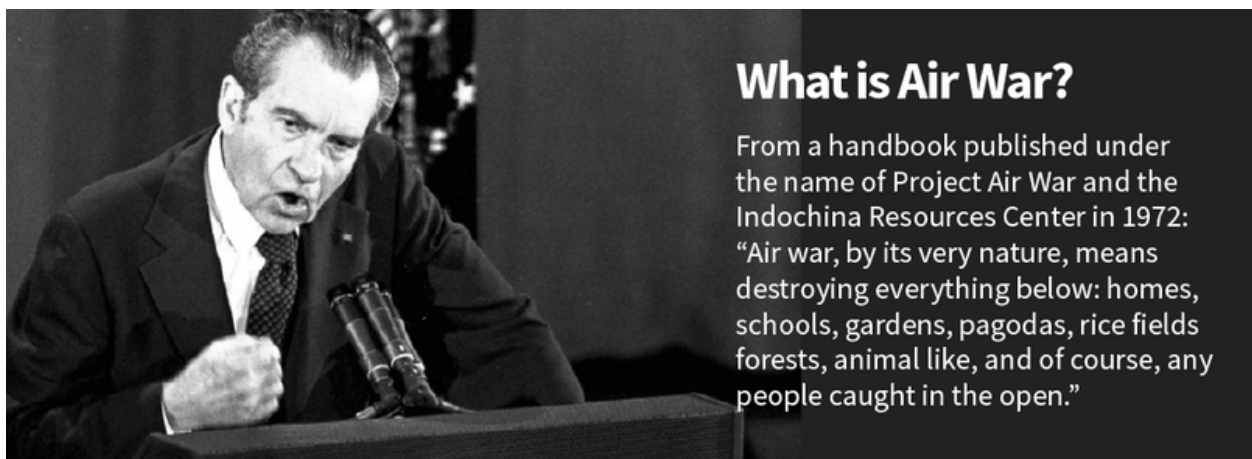
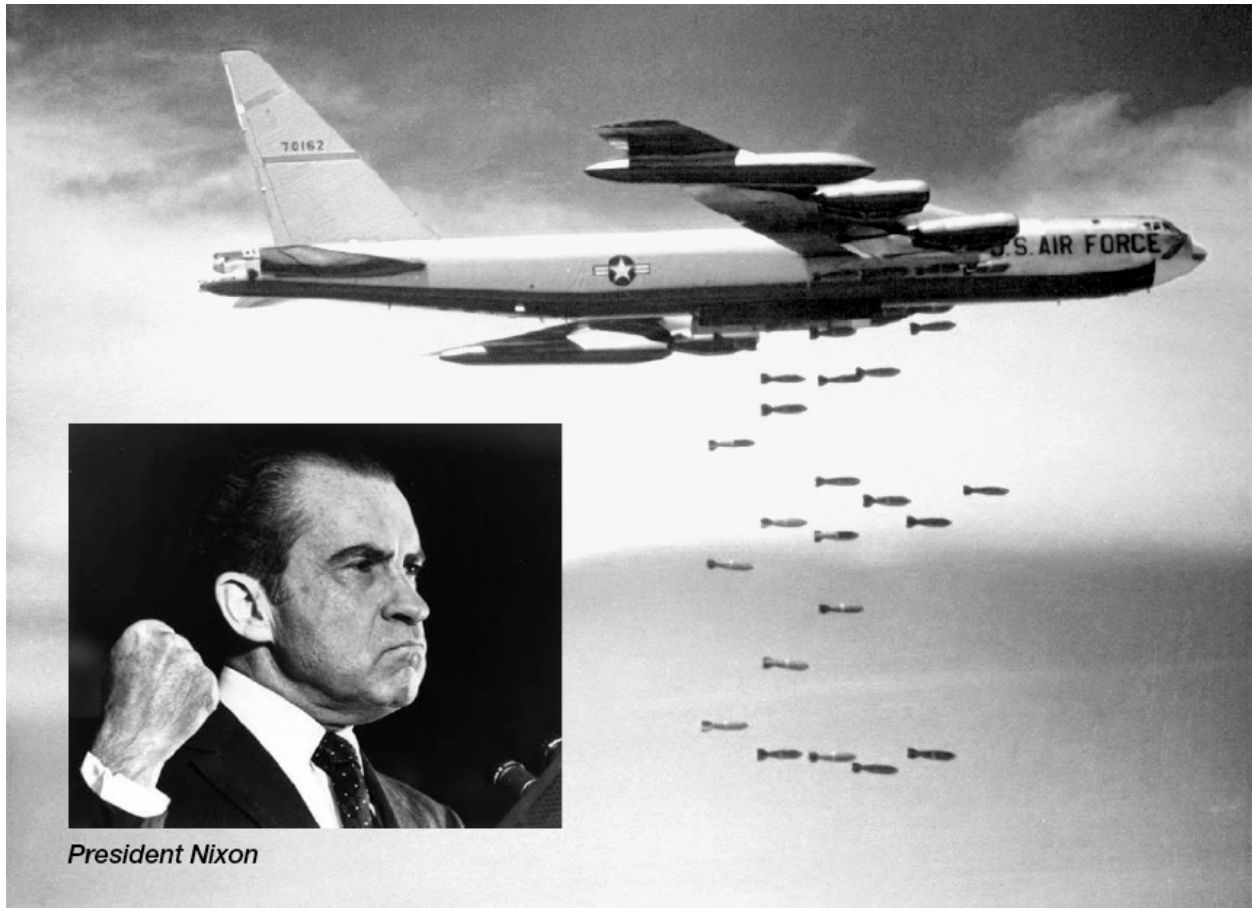
“More reports of the secret bombing campaign surfaced in the press and records of Congressional proceedings, but it was not until 2000 that official the USAF records of US bombing activity over Indochina from 1964 to 1973 were declassified by President Bill Clinton.

“Some sources say that during the first phase of the bombings lasting until April 1970, ‘Operation Breakfast’, the SAC conducted 3,630 sorties and dropped 110,000 tons of bombs and that in the entire four-year campaign the US dropped about 540,000 tons of bombs. In the book *Bombs Over Cambodia*, historians Ben Kiernan and Taylor Owen state that, based on their analysis of the declassified documents, 2,756,941 tons of ordnance was dropped during Operation Menu, more than the US dropped on Japan during World War II.

“The authors also say that US planes flew 230,516 sorties over 113,716 sites. Estimates of casualties vary widely as well, but it is believed that somewhere between 100,000 and 600,000 civilians died in the bombing and two million became homeless. Some sources say that hundreds of thousands more Cambodians died from the effects of displacement, illness or starvation as a direct result of the bombings.

“The carpet bombing of Cambodia lasted until August 1973. It devastated the countryside and the chaos and upheaval it unleashed played a big part in the installation of the genocidal Khmer Rouge regime led by Pol Pot. The Khmer Rouge was responsible for the deaths of up to two million Cambodians through executions, forced labour and starvation.”

³<https://www.thebigchilli.com/feature-stories/americas-secret-war-and-the-bombing-of-southeast-asia>



Suggestions for further reading

1. Anderson, David L. (2004). *Columbia Guide to the Vietnam War*. New York: Columbia University Press.
2. Angio, Joe. *Nixon a Presidency Revealed* (2007) The History Channel television documentary
3. Appy, Christian G. (2006). *Vietnam: The Definitive Oral History, Told from All Sides*. London: Ebury Press.
4. Baker, Kevin. *Stabbed in the Back! The past and future of a right-wing myth*, Harper's Magazine (June 2006)
5. Berman, Larry (1989). *Lyndon Johnson's War: The Road to Stalemate in Vietnam*. New York: W. W. Norton & Company.
6. Blaufarb, Douglas S. (1977). *The Counterinsurgency Era: U.S. Doctrine and Performance, 1950 to the Present*. New York: Free Press.
7. Blaufarb Douglas S. *The Counterinsurgency Era* (1977). A history of the Kennedy Administration's involvement in South Vietnam.
8. Brigham, Robert K. *Battlefield Vietnam: A Brief History*. A PBS interactive website.
9. Brocheux, Pierre (2007). *Ho Chi Minh: a biography*. Cambridge University Press. p. 198.
10. Buckley, Kevin. *Pacification's Deadly Price*, Newsweek, 19 June 1972.
11. Buzzanco, Bob. *25 Years After End of Vietnam War: Myths Keep Us from Coming to Terms with Vietnam*, The Baltimore Sun (17 April 2000) "25 Years After End of Vietnam War Myths Keep Us From Coming To Terms With Vietnam". Archived from the original on 5 June 2008. Retrieved 11 June 2008.
12. Carney, Timothy (1989). *The Unexpected Victory*. In Karl D. Jackson, ed., *Cambodia, 1975-1978: Rendezvous with Death* (pp. 13-35). Princeton, NJ: Princeton University Press.
13. Church, Peter, ed. (2006). *A Short History of South-East Asia*.
14. Cooper, Chester L. (1970). *The Lost Crusade: America in Vietnam*.
15. Cooper, John F. (2019). *Communist Nations' Military Assistance*. Routledge.
16. Courtwright, David T. (2005). *Sky as Frontier: Adventure, Aviation, and Empire*. College Station, TX: Texas A&M University Press.
17. Crook, John R. (2008). *Court of Appeals Affirms Dismissal of Agent Orange Litigation*. American Journal of International Law. 102 (3): 662-64.
18. Crump, Laurien (2015). *The Warsaw Pact Reconsidered: International Relations in Eastern Europe, 1955-1969*. Oxon: Routledge.
19. Demma, Vincent H. (1989). *The U.S. Army in Vietnam*. American Military History. Washington, DC: US Army Center of Military History. pp. 619-94.
20. Dennis, Peter; et al. (2008). *The Oxford Companion to Australian Military History (Second ed.)*. Melbourne: Oxford University Press Australia & New Zealand. ISBN 978-0195517842.
21. DoD (6 November 1998). *Name of Technical Sergeant Richard B. Fitzgibbon to be added to the Vietnam Veterans Memorial*. Department of Defense (DoD). Archived from the original on 20 October 2013.

22. Duiker, William J. (1981). *The Communist Road to Power in Vietnam*. Westview Press. ISBN 978-0891587941.
23. Duncanson, Dennis J. (1968). *Government and Revolution in Vietnam*. Oxford University Press. OCLC 411221.
24. Etcheson, Craig (2005). *After the Killing Fields: Lessons from the Cambodian Genocide*. New York: Praeger.
25. Fall, Bernard B. (1967). *The Two Viet-Nams: A Political and Military Analysis (2nd ed.)*. New York: Praeger.
26. Fincher, Ernest Barksdale, *The Vietnam War* (1980).
27. Ford, Harold P. (1998). *CIA and the Vietnam Policymakers: Three Episodes, 1962-1968*.
28. Gerdes, Louise I., ed. (2005). *Examining Issues Through Political Cartoons: The Vietnam War*. Greenhaven Press.
29. Gettleman, Marvin E.; Franklin, Jane; Young, Marilyn *Vietnam and America: A Documented History*. (1995).
30. Greiner, Bernd (2010). *War Without Fronts: The USA in Vietnam*. London: Vintage Books.
31. Hammond, William. *Public Affairs: The Military and the Media, 1962-1968* (1987); *Public Affairs: The Military and the Media, 1968-1973* (1995). Full-scale history of the war by U.S. Army; much broader than title suggests.
32. Healy, Gene (2009). *The Cult of the Presidency: America's Dangerous Devotion to Executive Power*. Cato Institute.
33. Herring, George C. (2001). *America's Longest War: The United States and Vietnam, 1950-1975* (4th ed.). New York: McGraw-Hill.
34. Hitchens, Christopher. *The Vietnam Syndrome*.
35. Holm, Jeanne (1992). *Women in the Military: An Unfinished Revolution (Rev. ed.)*. Novato, CA: Presidio Press.
36. Karnow, Stanley (1997). *Vietnam: A History (2nd ed.)*. New York: Penguin Books.
37. Kelly, Michael P. (2002). *Where We Were in Vietnam*. Oregon: Hellgate Press.
38. Khong, Yuen Foong (1992). *Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965*. Princeton University Press.
39. Kiernan, Ben (2008). *The Pol Pot Regime: Race, Power, and Genocide in Cambodia Under the Khmer Rouge (3rd ed.)*. New Haven, Connecticut: Yale University Press.
40. Kolko, Gabriel (1985). *Anatomy of a War: Vietnam, the United States, and the Modern Historical Experience*. New York: Pantheon Books.
41. Kutler, Stanley I., ed. (1996). *Encyclopedia of the Vietnam War*. New York: Charles Scribner's Sons.
42. Lawrence, A.T. (2009). *Crucible Vietnam: Memoir of an Infantry Lieutenant*. Jefferson, North Carolina: McFarland.
43. Lawrence, Mark Atwood (2008). *The Vietnam War: A Concise International History*. Oxford University Press.
44. Leepson, Marc ed. (1999). *Dictionary of the Vietnam War*. New York: Webster's New World.

45. Lewy, Guenter (1978). *America in Vietnam*. New York: Oxford University Press.
46. Logevall, Fredrik (2001). *The Origins of the Vietnam War*. Harlow: Longman.
47. McGibbon, Ian; ed (2000). *The Oxford Companion to New Zealand Military History*. Auckland: Oxford University Press.
48. McMahon, Robert J. (1995). *Major Problems in the History of the Vietnam War: Documents and Essays*.
49. McNamara, Robert S.; Blight, James G.; Brigham, Robert K.; Biersteker, Thomas J.; Schandler, Herbert (1999). *Argument Without End: In Search of Answers to the Vietnam Tragedy*. New York: PublicAffairs.
50. McNeill, Ian (1993). *To Long Tan: The Australian Army and the Vietnam War 1950-1966*. St Leonards: Allen & Unwin.
51. Milne, David (2008). *America's Rasputin: Walt Rostow and the Vietnam War*. New York: Hill & Wang.
52. Morse, Edwin E. (1996). *Tonkin Gulf and the Escalation of the Vietnam War*. Chapel Hill, North Carolina: University of North Carolina Press.
53. Moss, George D. *Vietnam (4th ed 2002)* textbook.
54. Moyar, Mark (2006). *Triumph Forsaken: The Vietnam War, 1954-1965*. New York: Cambridge University Press.
55. Major General Spurgeon Neel. *Medical Support of the U.S. Army in Vietnam 1965-1970* (Department of the Army 1991) official medical history
56. Neale, Jonathan (2001). *The American War: Vietnam, 1960-1975*. London: Bookmarks.
57. Nelson, Deborah (2008). *The War Behind Me: Vietnam Veterans Confront the Truth about U.S. War Crimes*. Philadelphia, PA: Basic Books.
58. Nulty, Bernard. *The Vietnam War* (1998) New York: Barnes and Noble.
59. Oberdorfer, Don (2001) [1971]. *Tet! The Turning Point in the Vietnam War*. Baltimore, MD: Johns Hopkins University Press.
60. Obermeyer, Ziad; Murray, Christopher J.L.; Gakidou, Emmanuela (2008). *Fifty years of violent war deaths from Vietnam to Bosnia: analysis of data from the world health survey programme*. BMJ. 336 (7659): 1482-86.
61. Olson, James S.; Roberts, Randy (2008). *Where the Domino Fell: America and Vietnam, Where the Domino Fell: America and Vietnam 1945-1995 (5th ed.)*. Malden, MA: Blackwell Publishing.
62. Palmer, Bruce Jr. *The Twenty-Five Year War*. (1984), narrative military history by a senior U.S. general.
63. Palmer, Dave R. (1978). *Summons of Trumpet: U.S.-Vietnam in Perspective*. Novato, CA: Presidio Press.
64. Palmer, Michael G. (2007). *The Case of Agent Orange*. Contemporary Southeast Asia. 29 (1): 172-95.
65. Prados, John (2006). *The Road South: The Ho Chi Minh Trail*. In Andrew Wiest, ed., *Rolling Thunder in a Gentle Land* (pp. 74-95). Oxford: Osprey Publishing.
66. Robbins, Mary Susannah (2007). *Against the Vietnam War: Writings by Activists*. Lanham, MD: Rowman & Littlefield Publishers.

67. Roberts, Anthea (2005). *The Agent Orange Case: Vietnam Ass'n for Victims of Agent Orange/Dioxin v. Dow Chemical Co.* ASIL Proceedings. 99 (1): 380-85.
68. Roberts III, Mervyn Edwin. *The Psychological War for Vietnam, 1960-1968* (2018)
69. Schandler, Herbert Y. (2009). *America in Vietnam: The War That Couldn't Be Won.* Lanham, MD: Rowman & Littlefield.
70. Schell, Jonathan. *The Time of Illusion* (1976).
71. Schulzinger, Robert D. *A Time for War: The United States and Vietnam, 1941-1975* (1997).
72. Sheehan, Neil (1989). *A Bright Shining Lie: John Paul Vann and America in Vietnam.* New York: Vintage.
73. Sorley, Lewis, *A Better War: The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam.* (1999), based upon still classified tape-recorded meetings of top level US commanders in Vietnam,
74. Spector, Ronald. *After Tet: The Bloodiest Year in Vietnam* (1992), very broad coverage of 1968.
75. Stanton, Shelby L. (2003). *Vietnam order of battle (2003 ed.).* Stackpole Books.
76. Stone, Richard (2007). *Agent Orange's Bitter Harvest.* Science. 315 (5809): 176-79.
77. Stuart-Fox, Martin (1997). *A History of Laos.* Cambridge: Cambridge University Press.
78. Summers, Harry G. *On Strategy: A Critical Analysis of the Vietnam War,* Presidio press (1982),
79. Thayer, Thomas C. (1985). *War Without Fronts: The American Experience in Vietnam.* Boulder, CO: Westview Press.
80. Tucker, Spencer. ed. *Encyclopedia of the Vietnam War,* (1998) 3 vol. reference set; also one-volume abridgement (2001).
81. Tucker, Spencer (2011) [1998]. *The Encyclopedia of the Vietnam War: A Political, Social, and Military History.* ABC-CLIO.
82. Turner, Robert F. (1975). *Vietnamese Communism: Its Origins and Development.* Stanford, CA: Hoover Institution Press.
83. Turse, Nick (2013). *Kill Anything That Moves: The Real American War in Vietnam.* New York: Metropolitan Books.
84. Vietnam Task Force (1969). *Report of the Office of the Secretary of Defense Vietnam Task Force.* Washington, DC: Office of the Secretary of Defense.
85. Westheider, James E. (2007). *The Vietnam War.* Westport, CN: Greenwood Press. ISBN 978-0313337550.
86. Willbanks, James H. (2009). *Vietnam War almanac.* Infobase Publishing. ISBN 978-0816071029.
87. Witz, James J. *The Tet Offensive: Intelligence Failure in War* (1991).
88. Woodruff, Mark (2005). *Unheralded Victory: The Defeat of The Viet Cong and The North Vietnamese.* Arlington, VA: Presidio Press.
89. Young, Marilyn B. (1991). *The Vietnam Wars, 1945-1990.* New York: HarperPerennial.

Chapter 6

THE THREATS AND COSTS OF WAR

6.1 The training of soldiers

Within individual countries, murder is rightly considered to be the worst of crimes. But the institution of war tries to convince us that if a soldier murders someone from another country, whom the politicians have designated as an “enemy”, it is no longer a crime, no longer a violation of the common bonds of humanity. It is “heroic”.

In their hearts, soldiers know that this is nonsense. Murder is always murder. The men, women and children who are supposed to be the “enemy”, are just ordinary people, with whom the soldier really has no quarrel. Therefore when the training of soldiers wears off a little, so that they realize what they have done, they have to see themselves as murderers, and many commit suicide.

A recent article in the journal “Epidemiology” pointed out a startling statistic: for every American soldier killed in combat this year, 25 will commit suicide. The article also quotes the Department of Veterans Affairs, which says that 18 veterans commit suicide every day.

Obviously, the training of soldiers must overwrite fundamental ethical principles. This training must make a soldier abandon his or her individual conscience and sense of responsibility. It must turn the soldier from a compassionate human being into an automaton, a killing machine. How is this accomplished? Through erosion of the soldier’s self-respect. Through the endless repetition of senseless rituals where obedience is paramount and from which rational thought and conscience are banished.

In his book on fanaticism, *The True Believer* (1951), the American author Eric Hoffer gives the following description of the factors promoting self-sacrifice:

“To ripen a person for self-sacrifice, he must be stripped of his individual identity. He must cease to be George, Hans, Ivan or Tado - a human atom with an existence bounded by birth and death. The most drastic way to achieve this end is by the complete assimilation of the individual into a collective body. The fully assimilated individual does not see himself

and others as human beings. When asked who he is, his automatic response is that he is a German, a Russian, a Japanese, a Christian, a Muslim, a member of a certain tribe or family. He has no purpose, worth or destiny apart from his collective body, and as long as that body lives, he cannot really die. ...”

“The effacement of individual separateness must be thorough. In every act, however trivial, the individual must, by some ritual, associate himself with the congregation, the tribe, the party, etcetera. His joys and sorrows, his pride and confidence must spring from the fortunes and capacities of the group, rather than from his individual prospects or abilities. Above all, he must never feel alone. Though stranded on a desert island, he must feel that he is under the eyes of the group. To be cast out from the group must be equivalent to being cut off from life.”

“This is undoubtedly a primitive state of being, and its most perfect examples are found among primitive tribes. Mass movements strive to approximate this primitive perfection, and we are not imagining things when the anti-individualist bias of contemporary mass movements strikes us as being a throwback to the primitive.”

The conditioning of a soldier in a modern army follows the pattern described in Eric Hoffer’s book. The soldier’s training aims at abolishing his sense of individual separateness, individual responsibility, and moral judgment. It is filled with rituals, such as saluting, by which the soldier identifies with his tribe-like army group. His uniform also helps to strip him of his individual identity and to assimilate him into the group. The result of this psychological conditioning is that the soldier’s mind reverts to a primitive state. He surrenders his moral responsibility, and when the politicians tell him to kill, he kills.

6.2 Killing civilians

Between 2 September and 5 September, 1807, the civilian population of Copenhagen was subjected to a bombardment by British military forces, without any declaration of war. The purpose of the bombardment was to induce terror in the population, and to thereby force the surrender of the Danish fleet, which the British feared might otherwise fall into the hands of Napoleon. It was one of the first occasions on which civilians were deliberately targeted in this manner.

Copenhagen was almost undefended, since the Danish army was positioned at the southern boundary of the country, ready to repel a possible attack by Napoleon’s army. British troops and artillery were thus easily able to surround the city, while the British fleet occupied the harbor. On the first night of the bombardment, 5000 rounds were fired into the city, on the second night 2000, and on the third night 7000. New incendiary rockets developed by William Congreve were also used. More than 2000 civilians were killed by the bombardment, and about 30 percent of Copenhagen’s buildings were destroyed. The bicentenary of this barbaric event might be an appropriate time to think about state-sponsored terror, in which innocent civilians are deliberately targeted.



Figure 6.1: Contemporary Danish painting of the bombardment at night.



Figure 6.2: An illustration by Eckersberg of the Church of Our Lady being bombed.



Figure 6.3: *The Most Terrible Night*. View of Kongens Nytorv in Copenhagen During the English Bombardment of Copenhagen at Night between 4 and 5 September 1807.

The erosion of ethical principles during World War II

When Hitler invaded Poland in September, 1939, US President Franklin Delano Roosevelt appealed to Great Britain, France, and Germany to spare innocent civilians from terror bombing. "The ruthless bombing from the air of civilians in unfortified centers of population during the course of the hostilities", Roosevelt said (referring to the use of air bombardment during World War I) "...has sickened the hearts of every civilized man and woman, and has profoundly shocked the conscience of humanity." He urged "every Government which may be engaged in hostilities publicly to affirm its determination that its armed forces shall in no event, and under no circumstances, undertake the bombardment from the air of civilian populations or of unfortified cities."

Two weeks later, British Prime Minister Neville Chamberlain responded to Roosevelt's appeal with the words: "Whatever the lengths to which others may go, His Majesty's Government will never resort to the deliberate attack on women and children and other civilians for purposes of mere terrorism."

Much was destroyed during World War II, and among the casualties of the war were the ethical principles that Roosevelt and Chamberlain announced at its outset. At the time of Roosevelt and Chamberlain's declarations, terror bombing of civilians had already begun in the Far East. On 22 and 23 September, 1937, Japanese bombers attacked civilian populations in Nanjing and Canton. The attacks provoked widespread protests. The British Under Secretary of State for Foreign Affairs, Lord Cranborne, wrote: "Words cannot express the feelings of profound horror with which the news of these raids has been received by the whole civilized world. They are often directed against places far from the actual area of hostilities. The military objective, where it exists, seems to take a completely second place. The main object seems to be to inspire terror by the indiscriminate slaughter of civilians..."

On the 25th of September, 1939, Hitler's air force began a series of intense attacks on Warsaw. Civilian areas of the city, hospitals marked with the Red Cross symbol, and fleeing refugees all were targeted in a effort to force the surrender of the city through terror. On the 14th of May, 1940, Rotterdam was also devastated. Between the 7th of September 1940 and the 10th of May 1941, the German Luftwaffe carried out massive air attacks on targets in Britain. By May, 1941, 43,000 British civilians were killed and more than a million houses destroyed.

Although they were not the first to start it, by the end of the war the United States and Great Britain were bombing of civilians on a far greater scale than Japan and Germany had ever done. For example, on July 24-28, 1943, British and American bombers attacked Hamburg with an enormous incendiary raid whose official intention "the total destruction" of the city.

The result was a firestorm that did, if fact, lead to the total destruction of the city. One airman recalled, that "As far as I could see was one mass of fire. 'A sea of flame' has been the description, and that's an understatement. It was so bright that I could read the target maps and adjust the bomb-sight." Another pilot was "...amazed at the awe-inspiring sight of the target area. It seemed as though the whole of Hamburg was on fire from one



Figure 6.4: Picasso's famous painting *Guernica* was a protest following the Nazi bombing of civilians in a Basque town,

end to the other and a huge column of smoke was towering well above us - and we were on 20,000 feet! It all seemed almost incredible and, when I realized that I was looking at a city with a population of two millions, or about that, it became almost frightening to think of what must be going on down there in Hamburg."

Below, in the burning city, temperatures reached 1400 degrees Fahrenheit, a temperature at which lead and aluminum have long since liquefied. Powerful winds sucked new air into the firestorm. There were reports of babies being torn by the high winds from their mothers' arms and sucked into the flames. Of the 45,000 people killed, it has been estimated that 50 percent were women and children and many of the men killed were elderly, above military age. For weeks after the raids, survivors were plagued by "...droves of vicious rats, grown strong by feeding on the corpses that were left unburied within the rubble as well as the potatoes and other food supplies lost beneath the broken buildings."

The German cities Kassel, Pforzheim, Mainz, Dresden and Berlin were similarly destroyed, and in Japan, US bombing created firestorms in many cities, for example Tokyo, Kobe and Yokohama. In Tokyo alone, incendiary bombing caused more than 100,000 civilian casualties.

Hiroshima and Nagasaki

On August 6, 1945, at 8.15 in the morning, a nuclear fission bomb was exploded in the air over the civilian population of Hiroshima in an already virtually defeated Japan. The force of the explosion was equivalent to fifteen thousand tons of TNT. Out of a city of two hundred and fifty thousand, one hundred thousand were killed immediately, and another





hundred thousand were hurt. Many of the injured died later from radiation sickness. A few days later, Nagasaki was similarly destroyed.

The tragic destruction of the two Japanese cities was horrible enough in itself, but it also marked the start of a nuclear arms race that continues to cast a very dark shadow over the future of civilization. Not long afterwards, the Soviet Union exploded its own atomic bomb, creating feelings of panic in the United States. President Truman authorized an all-out effort to build superbombs based on thermonuclear reactions, the reactions that heat the sun and stars.

In March, 1954, the US tested a thermonuclear bomb at Bikini Atoll in the Pacific Ocean. It was 1000 times more powerful than the Hiroshima bomb. The Japanese fishing boat, Lucky Dragon, was 135 kilometers from the Bikini explosion, but radioactive fallout

from the explosion killed one crew member and made all the others seriously ill. The distance to the Marshall Islands was equally large, but even today, islanders continue to suffer from the effects of fallout from the test, for example frequent birth defects.

Driven by the paranoia of the Cold War, the number of nuclear weapons on both sides reached truly insane heights. At the worst point, there were 50,000 nuclear weapons in the world, with a total explosive power roughly a million times the power of the Hiroshima bomb. This was equivalent to 4 tons of TNT for every person on the planet - enough to destroy human civilization many times over - enough to threaten the existence of all life on earth.

At the end of the Cold War, most people heaved a sigh of relief and pushed the problem of nuclear weapons away from their minds. It was a threat to life too horrible to think about. People felt that they could do nothing in any case, and they hoped that the problem had finally disappeared.

Today, however, many thoughtful people realize that the problem of nuclear weapons has by no means disappeared, and in some ways it is even more serious now than it was during the Cold War. There are still over 15,000 nuclear weapons in the world, many of them hydrogen bombs, many on hair-trigger alert, ready to be fired with only a few minutes warning. The world has frequently come extremely close to accidental nuclear war. If nuclear weapons are allowed to exist for a long period of time, the probability for such a catastrophic accident to happen will grow into a certainty.

Current dangers also come from proliferation. Recently, more and more nations have come to possess nuclear weapons, and thus the danger that they will be used increases. For example, if Pakistan's less-than-stable government should fall, its nuclear weapons might find their way into the hands of terrorists, and against terrorism deterrence has no effect.

Thus we live at a special time in history - a time of crisis for civilization. We did not ask to be born at a moment of crisis, but such is our fate. Every person now alive has a special responsibility: We owe it, both to our ancestors and to future generations, to build a stable and cooperative future world. It must be a war-free world, from which nuclear weapons have been completely abolished. No person can achieve these changes alone, but together we can build the world that we desire. This will not happen through inaction, but it can happen through the dedicated work of large numbers of citizens.

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.

6.3 The direct and indirect costs of war

The costs of war, both direct and indirect, are so enormous that they are almost beyond comprehension. We face a direct threat because a thermonuclear war may destroy human civilization and much of the biosphere, and an indirect threat because the institution of war interferes seriously with the use of tax money for constructive and peaceful purposes.

Today, despite the end of the Cold War, the world spends roughly 1.7 trillion (i.e. 1.7 million million) US dollars each year on armaments. This colossal flood of money could have been used instead for education, famine relief, development of infrastructure, or on urgently needed public health measures.

The World Health Organization lacks funds to carry through an antimalarial program on as large a scale as would be desirable, but the entire program could be financed for less than our military establishments spend in a single day. Five hours of world arms spending is equivalent to the total cost of the 20-year WHO campaign that resulted in the eradication of smallpox. For every 100,000 people in the world, there are 556 soldiers, but only 85 doctors. Every soldier costs an average of \$20,000 per year, while the average spent on education is only \$380 per school-aged child. With a diversion of funds consumed by three weeks of military spending, the world could create a sanitary water supply for all its people, thus eliminating the cause of almost half of all human illness.

A new drug-resistant form of tuberculosis has recently become widespread in Asia and in the former Soviet Union. In order to combat this new and highly dangerous form of tuberculosis and to prevent its spread, WHO needs \$500 million, an amount equivalent to 1.2 hours of world arms spending.

Today's world is one in which roughly ten million children die every year from starvation or from diseases related to poverty. Besides this enormous waste of young lives through malnutrition and preventable disease, there is a huge waste of opportunities through inadequate education. The rate of illiteracy in the 25 least developed countries is 80%, and the total number of illiterates in the world is estimated to be 800 million. Meanwhile every 60 seconds the world spends \$6.5 million on armaments.

It is plain that if the almost unbelievable sums now wasted on the institution of war were used constructively, most of the pressing problems of humanity could be solved, but today the world spends more than 20 times as much on war as it does on development.

6.4 Medical and psychological consequences; loss of life

While in earlier epochs it may have been possible to confine the effects of war mainly to combatants, in the 20th century the victims of war were increasingly civilians, and especially children. For example, according to Quincy Wright's statistics, the First and Second World Wars cost the lives of 26 million soldiers, but the toll in civilian lives was much larger: 64 million.

Since the Second World War, despite the best efforts of the UN, there have been over 150 armed conflicts; and, if civil wars are included, there are on any given day an average of 12 wars somewhere in the world. In the conflicts in Indo-China, the proportion of civilian victims was between 80% and 90%, while in the Lebanese civil war some sources state that the proportion of civilian casualties was as high as 97%.

Civilian casualties often occur through malnutrition and through diseases that would

be preventable in normal circumstances. Because of the social disruption caused by war, normal supplies of food, safe water and medicine are interrupted, so that populations become vulnerable to famine and epidemics.¹

6.5 Effects of war on children

According to UNICEF figures, 90% of the casualties of recent wars have been civilians, and 50% children. The organization estimates that in recent years, violent conflicts have driven 20 million children from their homes. They have become refugees or internally displaced persons within their own countries.

During the last decade 2 million children have been killed and 6 million seriously injured or permanently disabled as the result of armed conflicts, while 1 million children have been orphaned or separated from their families. Of the ten countries with the highest rates of death of children under five years of age, seven are affected by armed conflicts. UNICEF estimates that 300,000 child soldiers are currently forced to fight in 30 armed conflicts throughout the world. Many of these have been forcibly recruited or abducted.

Even when they are not killed or wounded by conflicts, children often experience painful psychological traumas: the violent death of parents or close relatives, separation from their families, seeing family members tortured, displacement from home, disruption of ordinary life, exposure to shelling and other forms of combat, starvation and anxiety about the future.²

6.6 Refugees

Human Rights Watch estimates that in 2001 there were 15 million refugees in the world, forced from their countries by war, civil and political conflict, or by gross violations of human rights. In addition, there were an estimated 22 million internally displaced persons, violently forced from their homes but still within the borders of their countries.

In 2001, 78% of all refugees came from ten areas: Afghanistan, Angola, Burma, Burundi, Congo-Kinshasa, Eritrea, Iraq, the Palestinian territories, Somalia and Sudan. A quarter of all refugees are Palestinians, who make up the world's oldest and largest refugee population. 45% of the world's refugees have found sanctuaries in Asia, 30% in Africa, 19% in Europe and 5% in North America.

Refugees who have crossed an international border are in principle protected by Article 14 of the Universal Declaration of Human Rights, which affirms their right "to seek and to enjoy in other countries asylum from persecution". In 1950 the Office of the High Commissioner for Refugees was created to implement Article 14, and in 1951 the Convention Relating to the Status of Refugees was adopted by the UN. By 2002 this legally binding

¹<http://www.cadmusjournal.org/article/volume-2/issue-2-part-3/lessons-world-war-i>
<http://www.truth-out.org/opinion/item/27201-the-leading-terrorist-state>

²<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2080482/>

treaty had been signed by 140 nations. However the industrialized countries have recently adopted a very hostile and restrictive attitude towards refugees, subjecting them to arbitrary arrests, denial of social and economic rights, and even forcible return to countries in which they face persecution.

The status of internally displaced persons is even worse than that of refugees who have crossed international borders. In many cases the international community simply ignores their suffering, reluctant to interfere in the internal affairs of sovereign states. In fact, the United Nations Charter is self-contradictory in this respect, since on the one hand it calls for non-interference in the internal affairs of sovereign states, but on the other hand, people everywhere are guaranteed freedom from persecution by the Charter's Universal Declaration of Human Rights.³

6.7 Damage to infrastructure

Most insurance policies have clauses written in fine print exempting companies from payment of damage caused by war. The reason for this is simple. The damage caused by war is so enormous that insurance companies could never come near to paying for it without going bankrupt.

We mentioned above that the world spends 1.7 trillion dollars each year on preparations for war. A similarly colossal amount is needed to repair the damage to infrastructure caused by war. Sometimes this damage is unintended, but sometimes it is intentional.

During World War II, one of the main aims of air attacks by both sides was to destroy the industrial infrastructure of the opponent. This made some sense in a war expected to last several years, because the aim was to prevent the enemy from producing more munitions. However, during the Gulf War of 1990, the infrastructure of Iraq was attacked, even though the war was expected to be short. Electrical generating plants and water purification facilities were deliberately destroyed with the apparent aim of obtaining leverage over Iraq after the war.

In general, because war has such a catastrophic effect on infrastructure, it can be thought of as the opposite of development. War is the greatest generator of poverty.⁴

6.8 Ecological damage

Warfare during the 20th century has not only caused the loss of 175 million lives (primarily civilians) - it has also caused the greatest ecological catastrophes in human history. The damage takes place even in times of peace. Studies by Joni Seager, a geographer at the

³<https://www.hrw.org/topic/refugees>

⁴<https://www.wsws.org/en/articles/2002/11/iraq-n04.html>

<http://www.globalresearch.ca/crimes-against-humanity-the-destruction-of-iraqs-electricity-infrastructure-the-social-economic-and-environmental-impacts/5355665>

<http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/00157630-EN-ERP-48.PDF>

University of Vermont, conclude that “a military presence anywhere in the world is the single most reliable predictor of ecological damage”.

Modern warfare destroys environments to such a degree that it has been described as an “environmental holocaust.” For example, herbicides use in the Vietnam War killed an estimated 6.2 billion board-feet of hardwood trees in the forests north and west of Saigon, according to the American Association for the Advancement of Science. Herbicides such as Agent Orange also made enormous areas of previously fertile land unsuitable for agriculture for many years to come. In Vietnam and elsewhere in the world, valuable agricultural land has also been lost because land mines or the remains of cluster bombs make it too dangerous for farming.

During the Gulf War of 1990, the oil spills amounted to 150 million barrels, 650 times the amount released into the environment by the notorious Exxon Valdez disaster. During the Gulf War an enormous number of shells made of depleted uranium were fired. When the dust produced by exploded shells is inhaled it often produces cancer, and it will remain in the environment of Iraq for decades.

Radioactive fallout from nuclear tests pollutes the global environment and causes many thousands of cases of cancer, as well as birth abnormalities. Most nuclear tests have been carried out on lands belonging to indigenous peoples. Agent Orange also produced cancer, birth abnormalities and other serious forms of illness both in the Vietnamese population and among the foreign soldiers fighting in Vietnam⁵

6.9 Links between poverty and war

There are several relationships between intolerable economic inequality and war. Today 2.7 billion people live on less than 2 dollars a day - 1.1 billion on less than 1 dollar per day. 18 million of our fellow humans die each year from poverty-related causes. In 2006, 1.1 billion people lacked safe drinking water, and waterborne diseases killed an estimated 1.8 million people. The developing countries are also the scene of a resurgence of other infectious diseases, such as malaria, drug-resistant tuberculosis and HIV/AIDS.

Meanwhile, in 2011, world military budgets reached 1,700,000,000,000 dollars (i.e. 1.7 million million dollars). This amount of money is almost too large to be imagined. The fact that it is being spent means that many people are making a living from the institution of war. Wealthy and powerful lobbies from the military-industrial complex are able to influence mass media and governments. Thus the institution of war persists, although we know very well that it is a threat to civilization and that it responsible for much of the suffering that humans experience.

Today’s military spending of almost two trillion US dollars per year would be more than enough to finance safe drinking water for the entire world, and to bring primary health care and family planning advice to all. If used constructively, the money now wasted (or worse

⁵<http://www.dailymail.co.uk/news/article-2401378/Agent-Orange-Vietnamese-children-suffering-effects-herbicide-sprayed-US-Army-40-years-ago.html>

than wasted) on the institution of war could also help the world to make the transition from fossil fuel use to renewable energy systems.

Military might is used by powerful industrialized nations to maintain economic hegemony over less developed countries. This is true today, even though the colonial era is supposed to be over (as has been amply documented by Professor Michael Klare in his books on “Resource Wars”).

The way in which the industrialized countries maintain their control over less developed nations can be illustrated by the “resource curse”, i.e. the fact that resource-rich developing countries are no better off economically than those that lack resources, but are cursed with corrupt and undemocratic governments. This is because foreign corporations extracting local resources under unfair agreements exist in a symbiotic relationship with corrupt local officials.

One might think that taxation of foreign resource-extracting firms would provide developing countries with large incomes. However, there is at present no international law governing multinational tax arrangements. These are usually agreed to on a bilateral basis, and the industrialized countries have stronger bargaining powers in arranging the bilateral agreements.

Another 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.

There is also another, less obvious, link between intolerable economic inequality war: Abolition of the institution of war will require the replacement of “might makes right” by the rule international law. It will require development of effective global governance. But reform and strengthening of the United Nations is blocked by wealthy countries because they are afraid of losing their privileged positions. If global economic inequality were less enormous, the problem of unifying the world would be simplified.

Let us work to break the links between poverty and war! To do that, we must work for laws that will restrict the international sale of small arms; we must work for a fair relationship between developing countries and multinational corporations; and above all, we must question the need for colossal military budgets. By following this path we can free the world from the intolerable suffering caused by poverty and from the equally intolerable suffering caused by war.

6.10 The threat of nuclear war

As bad as conventional arms and conventional weapons may be, it is the possibility of a catastrophic nuclear war that poses the greatest threat to humanity. There are today roughly 16,000 nuclear warheads in the world. The total explosive power of the warheads that exist or that could be made on short notice is approximately equal to 500,000 Hiroshima bombs.

To multiply the tragedy of Hiroshima by a factor of half a million makes an enormous difference, not only quantitatively, but also qualitatively. Those who have studied the question believe that a nuclear catastrophe today would inflict irreversible damage on our civilization, genetic pool and environment.

Thermonuclear weapons consist of an inner core where the fission of uranium-235 or plutonium takes place. The fission reaction in the core is able to start a fusion reaction in the next layer, which contains isotopes of hydrogen. It is possible to add a casing of ordinary uranium outside the hydrogen layer, and under the extreme conditions produced by the fusion reaction, this ordinary uranium can undergo fission. In this way, a fission-fusion-fission bomb of almost limitless power can be produced.

For a victim of severe radiation exposure, the symptoms during the first week are nausea, vomiting, fever, apathy, delirium, diarrhoea, oropharyngeal lesions and leukopenia. Death occurs during the first or second week.

We can perhaps be helped to imagine what a nuclear catastrophe means in human terms by reading the words of a young university professor, who was 2,500 meters from the hypocenter at the time of the bombing of Hiroshima: "Everything I saw made a deep impression: a park nearby covered with dead bodies... very badly injured people evacuated in my direction... Perhaps most impressive were girls, very young girls, not only with their clothes torn off, but their skin peeled off as well. ... My immediate thought was that this was like the hell I had always read about. ... I had never seen anything which resembled it before, but I thought that should there be a hell, this was it."

One argument that has been used in favor of nuclear weapons is that no sane political leader would employ them. However, the concept of deterrence ignores the possibility of war by accident or miscalculation, a danger that has been increased by nuclear proliferation and by the use of computers with very quick reaction times to control weapons systems.

Recent nuclear power plant accidents remind us that accidents frequently happen through human and technical failure, even for systems which are considered to be very "safe." We must also remember the time scale of the problem. To assure the future of humanity, nuclear catastrophe must be avoided year after year and decade after decade. In the long run, the safety of civilization cannot be achieved except by the abolition of nuclear weapons, and ultimately the abolition of the institution of war.

In 1985, International Physicians for the Prevention of Nuclear War received the Nobel Peace Prize. IPPNW had been founded in 1980 by six physicians, three from the Soviet Union and three from the United States. Today, the organization has wide membership among the world's physicians. Professor Bernard Lowen of the Harvard School of Public Health, one of the founders of IPPNW, said in a recent speech:

“...No public health hazard ever faced by humankind equals the threat of nuclear war. Never before has man possessed the destructive resources to make this planet uninhabitable... Modern medicine has nothing to offer, not even a token benefit, in the event of nuclear war...”

“We are but transient passengers on this planet Earth. It does not belong to us. We are not free to doom generations yet unborn. We are not at liberty to erase humanity’s past or dim its future. Social systems do not endure for eternity. Only life can lay claim to uninterrupted continuity. This continuity is sacred.”

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."⁶

⁶<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/>



Figure 6.5: U.N. Secretary General Antonio Guterres addressed the Human Rights Council at the United Nations in Geneva, Switzerland February 26, 2018.

Speaking to the Conference on Disarmament at the U.N. complex in Geneva, Guterres said many states still wrongly thought that nuclear weapons made the world safer.

“There is great and justified anxiety around the world about the threat of nuclear war,” he said.

“Countries persist in clinging to the fallacious idea that nuclear arms make the world safer ... At the global level, we must work towards forging a new momentum on eliminating nuclear weapons.”

World War II: a continuation of World War I

In the Second World War, the number of soldiers killed was roughly the same as in World War I, but the numbers of civilian deaths was much larger. In the USSR alone, about 20 million people are thought to have been killed, directly or indirectly, by World War II, and of these only 7.5 million were battle deaths. Many of the USSR’s civilian deaths were caused by starvation, disease or exposure. Civilian populations also suffered greatly in the devastating bombings of cities such as London, Coventry, Rotterdam, Warsaw, Dresden, Cologne, Berlin, Tokyo, Hiroshima and Nagasaki. In World War II, the total number of deaths, civilian and military, is estimated to have been between 62 and 78 million.

Do Benjamin Netanyahu and Ehud Barak, who are contemplating starting what might develop into World War III, have any imaginative concept of what it would be like? Netanyahu has told the Israeli people that only 500 of their citizens would be killed, and that the conflict would be over in a month. One is reminded of the Austrian leaders in 1914, who started a what they thought would be a small action to punish the Serbian nationalists for their Pan-Slavic ambitions. When the result was a world-destroying war, they said “That is not what we intended.” Of course it is not what they intended, but nobody can control the escalation of conflicts. The astonishing unrealism of the Netanyahu-Barak

<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>

<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/>

statements also reminds one of Kaiser Wilhelm's monumentally unrealistic words to his departing troops: "You will be home before the leaves are off the trees."

The planned attack on Iran would not only violate international law, but would also violate common sense and the wishes of the people of Israel. The probable result would be a massive Iranian missile attack on Tel Aviv, and Iran would probably also close the Straits of Hormuz. If the United States responded by bombing Iranian targets, Iran would probably use missiles to sink one or more of the US ships in the Persian Gulf. One can easily imagine other steps in the escalation of the conflict: a revolution in Pakistan; the entry of nuclear-armed Pakistan into the war on the side of Iran; a preemptive nuclear strike by Israel against Pakistan's nuclear weapons; and Chinese-Russian support of Iran. In the tense atmosphere of such a war, the danger of a major nuclear exchange, due to accident or miscalculation, would be very great.

Today, because the technology of killing has continued to develop, the danger of a catastrophic war with hydrogen bombs hangs like a dark cloud over the future of human civilization. The total explosive power of today's weapons is equivalent to roughly half a million Hiroshima bombs. To multiply the tragedy of Hiroshima and Nagasaki by a factor of half a million changes the danger qualitatively. What is threatened today is the complete breakdown of human society.

There are more than 15,000 nuclear weapons in the world today, about 4,000 of them on hair-trigger alert. The phrase "hair trigger alert" means that the person in charge has only 15 minutes to decide whether the warning from the radar system was true or false, and to decide whether or not to launch a counterattack. The danger of accidental nuclear war continues to be high. Technical failures and human failures have many times brought the world close to a catastrophic nuclear war. Those who know the system of "deterrence" best describe it as "an accident waiting to happen".

No one can win a nuclear war, just as no one can win a natural catastrophe like an earthquake or a tsunami. The effects of a nuclear war would be global, and all the nations of the world would suffer - also neutral nations.

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, blocking the hydrological cycle and destroying the ozone layer. Because of the devastating effect on global agriculture, darkness from even a small nuclear war could result in an estimated billion deaths from famine. This number corresponds to the fact that today, a billion people are chronically undernourished. If global agriculture were sufficiently damaged by a nuclear war, these vulnerable people might not survive. A large-scale nuclear war would be an even greater global catastrophe, completely destroying all agriculture for a period of ten years.

The tragedies of Chernobyl and Fukushima remind us that a nuclear war would make large areas of the world permanently uninhabitable because of long-lasting radioactive contamination.

The First World War was a colossal mistake. Today, the world stands on the threshold of an equally enormous disaster. Must we again be lead into a world-destroying war by a



few blind individuals who do not have the slightest idea of what such a war would be like?

6.11 Atoms for peace?

“Atoms for Peace”, the title of U.S. President Dwight D. Eisenhower’s 1953 speech to the U.N. General Assembly, may be regarded by future generations as being tragically self-contradictory. Nuclear power generation has led not only to dangerous proliferation of nuclear weapons, but also to disasters which have made large areas of the world permanently uninhabitable because of long-lived radioactive contamination.

According to Wikipedia, “...Under Atoms for Peace related programs, the US exported 25 tons of highly enriched uranium to 30 countries, mostly to fuel research reactors....The Soviet Union also exported 11 tons of HEU under a similar program.” This enormous quantity of loose weapons-usable highly enriched uranium, is now regarded as very worrying because of proliferation and terrorism risks.

A recent article in “The Examiner” (<http://www.examiner.com/article/nuclear-security-u-s-fails-to-protect-its-nuclear-materials-overseas>) pointed out that “...NRC and DOE could not account for the current location and disposition of U.S. HEW overseas in response to

a 1992 congressional mandate. U.S. agencies, in a 1993 report produced in response to the mandate, were able to verify the location of only 1.160 kilograms out of 17,500 kilograms of U.S. HEW estimated to have been exported.”

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.

The more recent disaster of 11 March, 2011, may prove to be very much worse than Chernobyl. According to an article by Harvey Wasserman (<http://www.commondreams.org/view/2014/02/03-3>), the ongoing fallout from the Fukushima catastrophe is already far in excess of that from Chernobyl. Ecosystems of the entire Pacific ocean are being contaminated by the 300 tons of radioactive water from Fukushima that continue to pour into the Pacific every day.

Meanwhile, the increasingly militaristic government of Japan’s Prime Minister Shinzo Abe has passed a State Secrets Act that makes it an offense punishable by 5 year’s imprisonment for journalists to report on the situation. Under this cloak of secrecy, attempts are being made to remove highly radioactive used fuel rods balanced precariously in a partially destroyed container hanging in the air above the stricken Unit Four. If an accident should occur, the released radioactivity could dwarf previous disasters.

Public opinion turned against nuclear power generation as a result of the Chernobyl and Fukushima catastrophes. Nevertheless, many governments insist on pushing forward their plans for opening new nuclear power plants, despite popular opposition. Nuclear power could never compete in price with solar energy or wind energy if it were not heavily subsidized by governments. Furthermore, if a careful accounting is made of the CO₂ released in the construction of nuclear power plants, the mining, refining and transportation of uranium ore, and the final decommissioning of the plants, the amount of CO₂ released is seen to be similar to that of coal-fired plants.

There are three basic reasons why nuclear power generation is one of the worst ideas ever conceived: First is the danger of proliferation of nuclear weapons, which will be



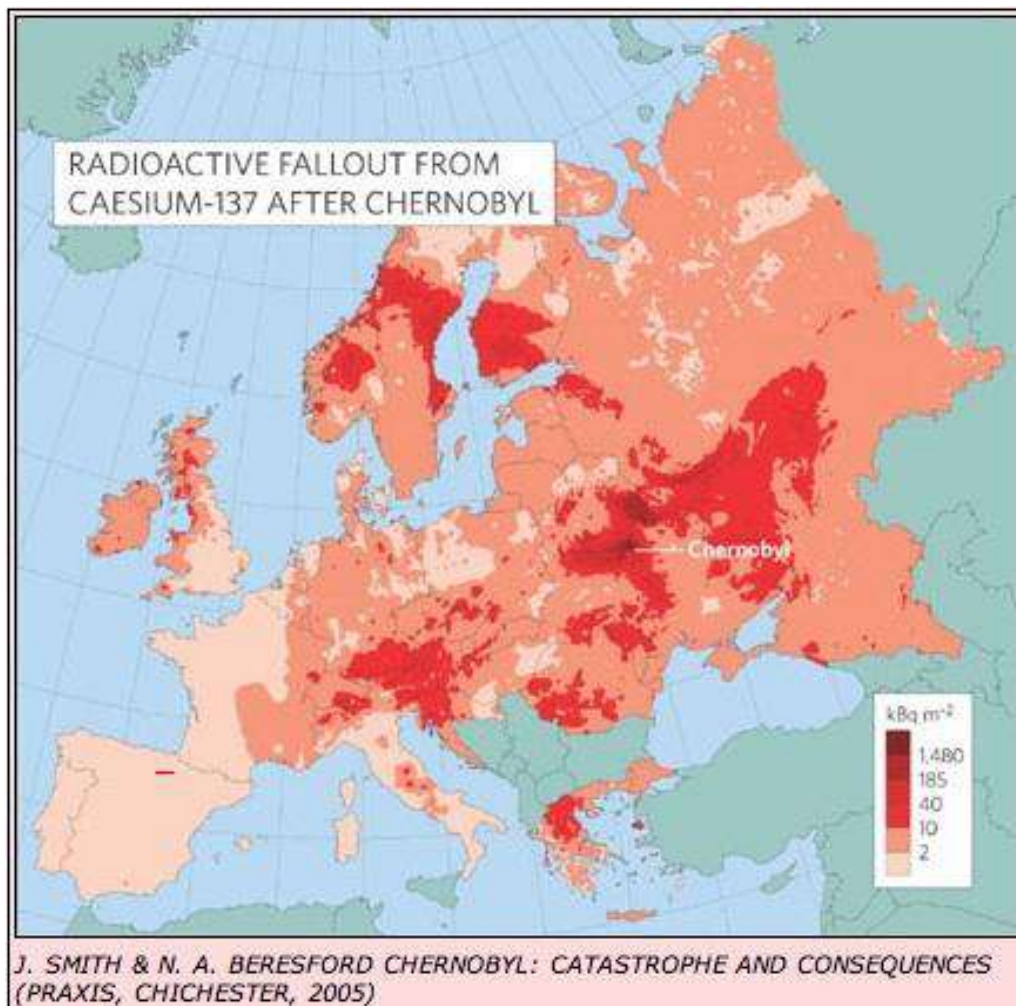
discussed in detail below. Secondly, there is the danger of catastrophic accidents, such as the ones that occurred at Chernobyl and Fukushima. Finally, the problem of how to safely dispose of or store used fuel rods has not been solved.

In thinking about the dangers posed by radioactive waste, we should remember that many of the dangerous radioisotopes involved have half-lives of hundreds of thousands of years. Thus, it is not sufficient to seal them in containers that will last for a century, or even a millennium. We must find containers that will last for a hundred thousand years or more, longer than any human structure has ever lasted.

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.

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,





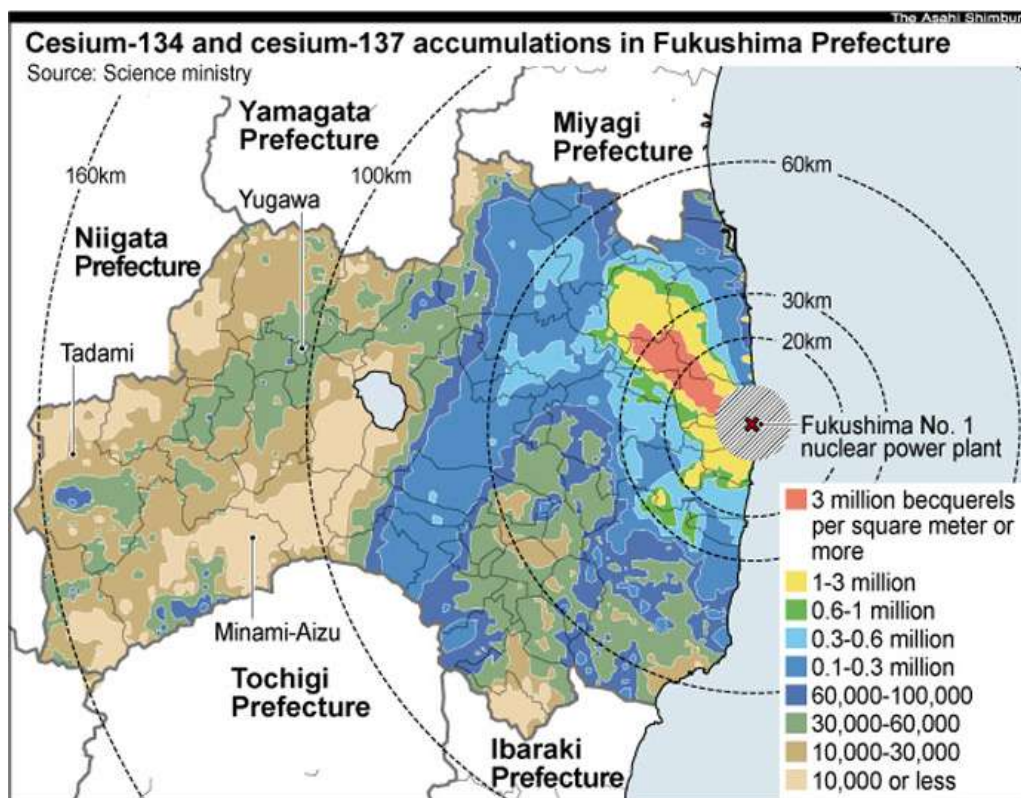


Figure 6.6: People evacuated from the region near to Fukushima wonder when they will be able to return to their homes. The honest answer is “never”.

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

Nuclear power generation is not a solution to the problem of obtaining energy without producing dangerous climate change: Known reserves of uranium are only sufficient for the generation of about 25 terawatt-years of electrical energy (Craig, J.R., Vaugn, D.J. and Skinner, B.J., “Resources of the Earth: Origin, Use and Environmental Impact, Third Edition”, page 210). This can be compared with the world’s current rate of energy use of over 14 terrawatts. Thus, if all of our energy were obtained from nuclear power, existing reserves of uranium would only be sufficient for about 2 years.

It is sometimes argued that a larger amount of electricity could be obtained from the

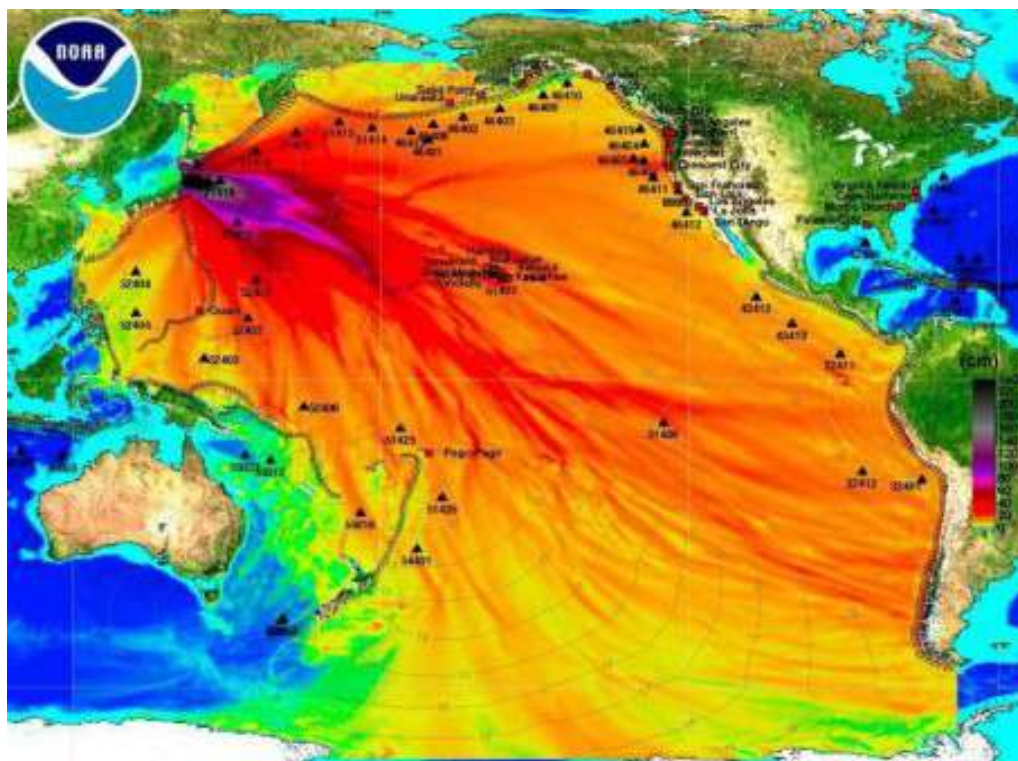


Figure 6.7: **Radioactive contamination from the Fukushima disaster is spreading through the food chain of marine life throughout the Pacific region.**

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 Korea 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.



Figure 6.8: The Israeli nuclear technician and whistleblower Mordechai Vanunu called public attention to Israel's nuclear weapons while on a trip to England. He was lured to Italy by a Mossad "honey trap", where he was drugged, kidnapped and transported to Israel by Mossad.



Figure 6.9: Vanunu was imprisoned for 18 years, during 11 of which he was held in solitary confinement and subjected to psychological torture, such as not being allowed to sleep for long periods.

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 Nuclear Non-Proliferation Treaty.

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 article (1 February, 2004) 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.

There is a danger that Pakistan's unpopular government may be overthrown, and that the revolutionists might 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.

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 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.

The slogan “Atoms for Peace” has proved to be such a misnomer that it would be laughable if it were not so tragic. Nuclear power generation has been a terrible mistake. We must stop before we turn our beautiful earth into a radioactive wasteland.

6.12 Cancer threat from radioactive leaks at Hanford

On August 9, 1945, a nuclear bomb was dropped on the Japanese city of Nagasaki. Within a radius of one mile, destruction was total. People were vaporized so that the only shadows on concrete pavements were left to show where they had been. Many people outside the radius of total destruction were trapped in their collapsed houses, and were burned alive by the fire that followed. By the end of 1945, an estimated 80,000 men, women, young children, babies and old people had died as a result of the bombing. As the years passed more people continued to die from radiation sickness.

Plutonium for the bomb that destroyed Nagasaki had been made at an enormous nuclear reactor station located at Hanford in the state of Washington. During the Cold War, the reactors at Hanford produced enough weapons-usable plutonium for 60,000 nuclear weapons. The continued existence of plutonium and highly-enriched uranium-235 in the stockpiles of nuclear weapons states hangs like a dark cloud over the future of humanity. A full scale thermonuclear war would be the ultimate ecological catastrophe, threatening to make the world permanently uninhabitable.

Besides playing a large role in the tragedy of Nagasaki, the reactor complex at Hanford has damaged the health of many thousands of Americans. The prospects for the future are even worse. Many millions of gallons of radioactive waste are held in Hanford’s aging storage tanks, the majority of which have exceeded their planned lifetimes. The following quotations are taken from a Wikipedia article on Hanford, especially the section devoted to ecological concerns:

“A huge volume of water from the Columbia River was required to dissipate the heat produced by Hanford’s nuclear reactors. From 1944 to 1971, pump systems drew cooling water from the river and, after treating this water for use by the reactors, returned it to the river. Before being released back into the river, the used water was held in large tanks known as retention basins for up to six hours. Longer-lived isotopes were not affected by this retention, and several tetrabecquerels entered the river every day. These releases were kept secret by the federal government. Radiation was later measured downstream as far west as the Washington and Oregon coasts.”

“The plutonium separation process also resulted in the release of radioactive isotopes into the air, which were carried by the wind throughout southeastern Washington and into parts of Idaho, Montana, Oregon and British Columbia. Downwinders were exposed to radionuclides, particularly Iodine 131... These radionuclides filtered into the food chain via contaminated fields where dairy cows grazed; hazardous fallout was ingested by communities who consumed the radioactive food and drank the milk. Most of these airborne releases were a part of Hanford’s routine operations, while a few of the larger releases occurred in isolated incidents.”

“In response to an article in the Spokane Spokesman Review in September 1985, the Department of Energy announced its intent to declassify environmental records and in February, 1986 released to the public 19,000 pages of previously unavailable historical documents about Hanford’s operations. The Washington State Department of Health collaborated with the citizen-led Hanford Health Information Network (HHIN) to publicize data about the health effects of Hanford’s operations. HHIN reports concluded that residents who lived downwind from Hanford or who used the Columbia River downstream were exposed to elevated doses of radiation that placed them at increased risk for various cancers and other diseases.”

“The most significant challenge at Hanford is stabilizing the 53 million U.S. Gallons (204,000 m³) of high-level radioactive waste stored in 177 underground tanks. About a third of these tanks have leaked waste into the soil and groundwater. As of 2008, most of the liquid waste has been transferred to more secure double-shelled tanks; however, 2.8 million U.S. Gallons (10,600 m³) of liquid waste, together with 27 million U.S. gallons (100,000 m³) of salt cake and sludge, remains in the single-shelled tanks. That waste was originally scheduled to be removed by 2018. The revised deadline is 2040. Nearby aquifers contain an estimated 270 billion U.S. Gallons (1 billion m³) of contaminated groundwater as a result of the leaks. As of 2008, 1 million U.S. Gallons (4,000 m³) of highly radioactive waste is traveling through the groundwater toward the Columbia River.”

The documents made public in 1986 revealed that radiation was intentionally and secretly released by the plant and that people living near to it acted as unknowing guinea pigs in experiments testing radiation dangers. Thousands of people who live in the vicinity of the Hanford Site have suffered an array of health problems including thyroid cancers, autoimmune diseases and reproductive disorders that they feel are the direct result of these releases and experiments.

In thinking about the dangers posed by leakage of radioactive waste, we should remember that many of the dangerous radioisotopes involved have half-lives of hundreds of

thousands of years. Thus, it is not sufficient to seal them into containers that will last for a century or even a millennium. We must find containers that will last for a hundred thousand years or more, longer than any human structure has ever lasted. This logic has lead Finland to deposit its radioactive waste in a complex of underground tunnels carved out of solid rock. But looking ahead for a hundred thousand years involves other problems: If humans survive for that long, what language will they speak? Certainly not the languages of today. How can we warn them that the complex of tunnels containing radioactive waste is a death trap? The reader is urged to see a film exploring these problems, “Into Eternity”, by the young Danish film-maker Michael Madsen. Here is the link: <http://dotsub.com/view/8e40ebda-5966-4212-9b96-6abbce3c6577>.

We have already gone a long way towards turning our beautiful planet earth into a nuclear wasteland. In the future, let us be more careful, as guardians of a precious heritage, the natural world and the lives of all future generations.

6.13 An accident waiting to happen

In Stanley Kubrick’s film, “Dr. Strangelove”, a paranoid ultra-nationalist brigadier general, Jack D. Ripper, orders a nuclear attack on the Soviet Union because he believes that the Soviets are using water fluoridation as a means to rob Americans of their “precious bodily fluids”. Efforts are made to recall the US bombers, but this proves to be impossible, and the attack triggers the Soviet “Doomsday Machine”. The world is destroyed.

Kubrick’s film is a black comedy, and we all laugh at it, especially because of the brilliant performance of Peter Sellers in multiple roles. Unfortunately, however, the film comes uncomfortably close to reality. An all-destroying nuclear war could very easily be started by an insane or incompetent person whose hand happens to be on the red button.

This possibility (or probability) has recently come to public attention through newspaper articles revealing that 11 of the officers responsible for launching US nuclear missiles have been fired because of drug addiction. Furthermore, a larger number of missile launch officers were found to be cheating on competence examinations. Three dozen officers were involved in the cheating ring, and some reports state that an equal number of others may have known about it., and remained silent. Finally, it was shown that safety rules were being deliberately ignored. The men involved, were said to be “burned out”.

According to an article in The Guardian (Wednesday, 15 January, 2014), “Revelations of misconduct and incompetence in the nuclear missile program go back at least to 2007, when six nuclear-tipped cruise missiles were accidentally loaded onto a B-52 bomber in Minot, North Dakota, and flown to a base in Louisiana.”

“Last March, military inspectors gave officers at the ICBM base in Minot the equivalent of a ‘D’ grade for launch mastery. A month later, 17 officers were stripped of their authority to launch the missiles.”

“In October, a senior air force officer in charge of 450 ICBM’s, major general Michael Carey, was fired after accusations of drunken misconduct during a summer trip to Moscow.



Figure 6.10: Peter Sellers (left) listens while Brigadier General Jack D. Ripper tells him about the Soviet conspiracy to steal his “precious bodily fluids”.

An internal investigation Â found Â that Carey drank heavily, cavorted with two foreign women and visited a nightclub called La Cantina, where Maj. Gen. Carey had alcohol and kept trying to get the band to let him play with them.”

The possibility that a catastrophic nuclear war could be triggered by a madman gains force from the recent statements of Benjamin Netanyahu, who has said repeatedly that, with or without US help, Israel intends to attack Iran. Such an attack, besides being a war crime, would be literally insane.

If Netanyahu believes that a war with Iran would be short or limited, he is ignoring several very obvious dangers. Such a war would most probably escalate into a widespread general war in the Middle East. It could cause a revolution in Pakistan, and the new revolutionary government of Pakistan would be likely to enter the war on the side of Iran, bringing with it Pakistan’s nuclear weapons. Russia and China, both staunch allies of Iran, might be drawn into the conflict. There is a danger that the conflict could escalate into a Third World War, where nuclear weapons might easily be used, either by accident or intentionally. .

China could do grave economic damage to the United States through its large dollar holdings. Much of the world’s supply of petroleum passes through the Straits of Hormuz, and a war in the region could greatly raise the price of oil, triggering a depression that might rival or surpass the Great Depression of the 1920’s and 1930’s. Â

The probability of a catastrophic nuclear war occurring by accident is made greater by the fact that several thousand nuclear weapons are kept on “hair-trigger alert” with a quasi-automatic reaction time measured in minutes. There is a constant danger that a nuclear war will be triggered by an error in evaluating a signal on a radar screen.



Figure 6.11: Peter Sellers as Dr. Strangelove. He has to restrain his black-gloved crippled hand, which keeps trying to give a Nazi salute.



Figure 6.12: General Buck Turgidson (George C. Scott) struggles with the Russian Ambassador. Peter Sellers (right) playing the US President, rebukes them for fighting in the War Room.



Figure 6.13: Major T. “King” Kong rides a nuclear bomb on its way down, where it will trigger the Soviet Doomsday Machine and ultimately destroy the world.



Figure 6.14: Benjamin Netanyahu has stated repeatedly that, with or without US support, Israel will attack Iran, an action that could escalate uncontrollably into World War III.



6.14 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 Buddhism. “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 Courts 1996 advisory Opinion unquestionably also represents the opinion of the majority of the worlds 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.⁷ 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. Grey⁸ expressed this concern as follows: “The problem, indeed the enduring problem, is that we are resting our future upon a nuclear deterrence system concerning which we cannot tolerate even a single malfunction.” General Curtis E. LeMay⁹ 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. Blair¹⁰ 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.”

⁷Of 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.

⁸Chairman, National Institute for Public Policy

⁹Founder and former Commander in Chief of the United States Strategic Air Command

¹⁰Brookings Institute

Today, the system that is supposed to give us security is called Mutually Assured Destruction, appropriately abbreviated as MAD. It is based on the idea of deterrence, which maintains that because of the threat of massive retaliation, no sane leader would start a nuclear war.

Before discussing other defects in the concept of deterrence, it must be said very clearly that the idea of “massive nuclear retaliation” is a form of genocide and is completely unacceptable from an ethical point of view. It violates not only the principles of common human decency and common sense, but also the ethical principles of every major religion.

Having said this, we can now turn to some of the other faults 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, or by terrorism. 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 “hair-trigger 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.

Incidents in which global disaster is avoided by a hair’s breadth are constantly occurring.

Will we use the discoveries of modern science constructively, and thus choose the path leading towards life? Or will we use science to produce more and more lethal weapons, which sooner or later, through a technical or human failure, will result in a catastrophic nuclear war? Will we thoughtlessly destroy our beautiful planet through unlimited growth of population and industry? The choice among these alternatives is ours to make. We live at a critical moment of history, a moment of crisis for civilization.

No one alive today asked to be born at a time of crisis, but history has given each of us an enormous responsibility. Of course we have our ordinary jobs, which we need to do in order to stay alive; but besides that, each of us has a second job, the duty to devote both time and effort to solving the serious problems that face civilization during the 21st century. We cannot rely on our politicians to do this for us. Many politicians are under the influence of powerful lobbies. Others are waiting for a clear expression of popular will. It is the people of the world themselves who must choose their own future and work hard to build it.

No single person can achieve the changes that we need, but together we can do it. The problem of building a stable, just, and war-free world is difficult, but it is not impossible. The large regions of our present-day world within which war has been eliminated can serve as models. There are a number of large countries with heterogeneous populations within which it has been possible to achieve internal peace and social cohesion, and if this is possible within such extremely large regions, it must also be possible globally.

We must replace the old world of international anarchy, chronic war, and institutionalized injustice by a new world of law. The United Nations Charter, the Universal Declaration of Human Rights and the International Criminal Court are steps in the right direction. These institutions need to be greatly strengthened and reformed. We also need a new global ethic, where loyalty to one’s family and nation will be supplemented by a higher loyalty to humanity as a whole. Tipping points in public opinion can occur suddenly. We can think, for example, of the Civil Rights Movement, or the rapid fall of the Berlin Wall,

or the sudden change that turned public opinion against smoking, or the sudden movement for freedom and democracy in the Arab world. A similar sudden change can occur soon regarding war and nuclear weapons.

We know that war is madness. We know that it is responsible for much of the suffering that humans experience. We know that war pollutes our planet and that the almost unimaginable sums wasted on war prevent the happiness and prosperity of mankind. We know that nuclear weapons are insane, and that the precariously balanced deterrence system can break down at any time through human error or computer errors or through terrorist actions, and that it definitely will break down within our lifetimes unless we abolish it. We know that nuclear war threatens to destroy civilization and much of the biosphere.

The logic is there. We must translate into popular action which will put an end to the undemocratic, money-driven, power-lust-driven war machine. The peoples of the world must say very clearly that nuclear weapons are an absolute evil; that their possession does not increase anyone's security; that their continued existence is a threat to the life of every person on the planet; and that these genocidal and potentially omnicidal weapons have no place in a civilized society.

Modern science has abolished time and distance as factors separating nations. On our shrunken globe today, there is room for one group only: the family of humankind. We must embrace all other humans as our brothers and sisters. More than that, we must feel that all of nature is part of the same sacred family; meadow flowers, blowing winds, rocks, trees, birds, animals, and other humans, all these are our brothers and sisters, deserving our care and protection. Only in this way can we survive together. Only in this way can we build a happy future.

"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.

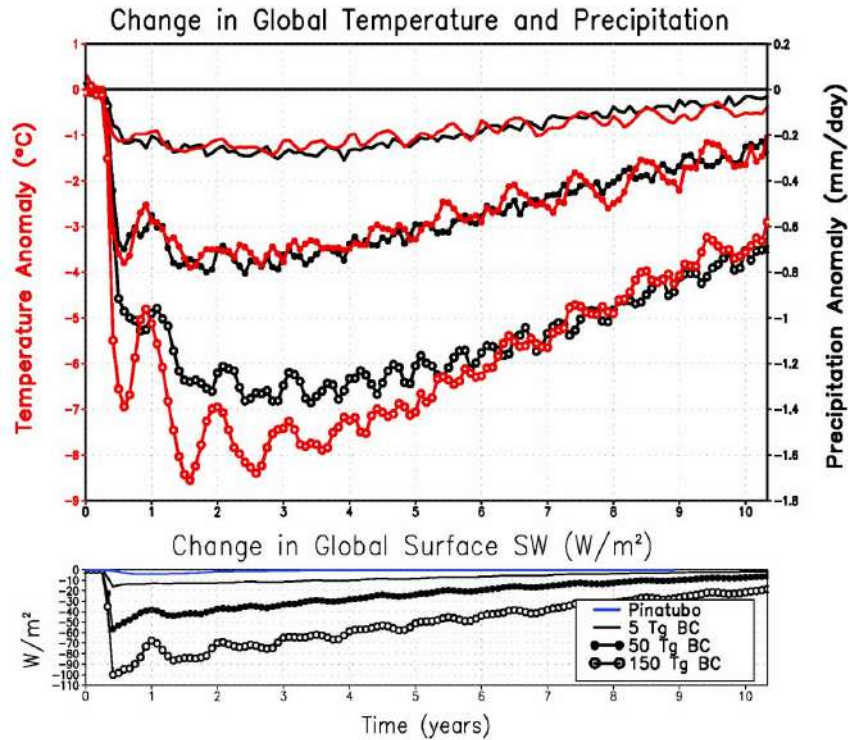


Figure 6.15: *Recent studies by atmospheric scientists have shown that the smoke from burning cities produced by even a limited nuclear war would have a devastating effect on global agriculture. The studies show that the smoke would rise to the stratosphere, where it would spread globally and remain 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. (O. Toon, A. Robock and R. Turco, “The Environmental Consequences of Nuclear War”, Physics Today, vol. 61, No. 12, 2008, p. 37-42)*

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, 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.

In this dangerous 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.

6.15 Nuclear weapons are criminal! Every war is a crime!

War was always madness, always immoral, always the cause of unspeakable suffering, economic waste and widespread destruction, and always a source of poverty, hate, barbarism and endless cycles of revenge and counter-revenge. It has always been a crime for soldiers to kill people, just as it is a crime for murderers in civil society to kill people. No flag has ever been wide enough to cover up atrocities.

But today, the development of all-destroying modern weapons has put war completely beyond the bounds of sanity and elementary humanity.

Can we not rid ourselves of both nuclear weapons and the institution of war itself? We must act quickly and resolutely before our beautiful world and everything that we love are reduced to radioactive ashes.

Suggestions for further reading

1. A. Robock, L. Oman, G. L. Stenchikov, O. B. Toon, C. Bardeen, and R. Turco, *Climatic consequences of regional nuclear conflicts*, Atmospheric Chemistry and Physics, Vol. 7, p. 2003-2012, (2007).
2. M. Mills, O. Toon, R. Turco, D. Kinnison, R. Garcia, *Massive global ozone loss predicted following regional nuclear conflict*, Proceedings of the National Academy of Sciences (USA), vol. 105(14), pp. 5307-12, Apr 8, (2008).
3. O. Toon, A. Robock, and R. Turco, *The Environmental Consequences of Nuclear War*, Physics Today, vol. 61, No. 12, p. 37-42, (2008).
4. R. Turco, O. Toon, T. Ackermann, J. Pollack, and C. Sagan, *Nuclear Winter: Global consequences of multiple nuclear explosions*, Science, Vol. 222, No. 4630, pp. 1283-1292, December (1983).
5. A. Robock, L. Oman, G. Stenchikov, *Nuclear winter revisited with a modern climate model and current nuclear arsenals: Still catastrophic consequences*, Journal of Geophysical Research - Atmospheres, Vol. 112, No. D13, p. 4 of 14, (2007).
6. I. Helfand, *An Assessment of the Extent of Projected Global Famine Resulting From Limited, Regional Nuclear War*, International Physicians for the Prevention of Nuclear War, Physicians for Social Responsibility, Leeds, MA, (2007).
7. George P. Schultz, William J. Perry, Henry A. Kissinger and Sam Nunn, *A World Free of Nuclear Weapons*, The Wall Street Journal, January 4, 2007, page A15 and January 15, (2008), page A15.
8. Mikhail Gorbachev, *The Nuclear Threat*, The Wall Street Journal, January 30, (2007), page A15.
9. Massimo D'Alema, Gianfranco Fini, Giorgio La Malfa, Arturo Parisi and Francesco Calogero, *For a World Free of Nuclear Weapons*, Corriere Della Sera, July 24, (2008).
10. Hoover Institution, *Reykjavik Revisited; Steps Towards a World Free of Nuclear Weapons*, October, (2007).

11. Douglas Hurd, Malcolm Rifkind, David Owen and George Robertson, *Start Worrying and Learn to Ditch the Bomb*, The Times, June 30, (2008).
12. Des Brown, Secretary of State for Defense, UK, *Laying the Foundations for Multilateral Disarmament*, Geneva Conference on Disarmament, February 5, (2008).
13. Government of Norway, International Conference on *Achieving the Vision of a World Free of Nuclear Weapons*, Oslo, Norway, February 26-27, (2008).
14. Jonas Gahr Støre, Foreign Minister, Norway, *Statement at the Conference on Disarmament*, Geneva, March 4, (2008).
15. Anne-Grete Strøm-Erichsen, Defense Minister, Norway, *Emerging Opportunities for Nuclear Disarmament*, Pugwash Conference, Canada, July 11, (2008).
16. Kevin Rudd, Prime Minister, Australia, *International Commission on Nuclear Non-Proliferation and Disarmament*, Media Release, July 9, (2008).
17. Helmut Schmidt, Richard von Weizsäcker, Egon Bahr and Hans-Dietrich Genscher, *Towards a Nuclear-Free World: a German View*, International Herald Tribune, January 9, (2009).
18. Hans M. Kristensen and Elliot Negin, *Support Growing for Removal of U.S. Nuclear Weapons from Europe*, Common Dreams Newscenter, first posted May 6, (2005).
19. David Krieger, *President-elect Obama and a World Free of Nuclear Weapons*, Nuclear Age Peace Foundation Website, (2008).
20. J.L. Henderson, *Hiroshima*, Longmans (1974).
21. A. Osada, *Children of the A-Bomb, The Testament of Boys and Girls of Hiroshima*, Putnam, New York (1963).
22. M. Hachiya, M.D., *Hiroshima Diary*, The University of North Carolina Press, Chapel Hill, N.C. (1955).
23. M. Yass, *Hiroshima*, G.P. Putnam's Sons, New York (1972).
24. R. Jungk, *Children of the Ashes*, Harcourt, Brace and World (1961).
25. B. Hirschfield, *A Cloud Over Hiroshima*, Baily Brothers and Swinfin Ltd. (1974).
26. J. Hersey, *Hiroshima*, Penguin Books Ltd. (1975).
27. R. Rhodes, *Dark Sun: The Making of the Hydrogen Bomb*, Simon and Schuster, New York, (1995).
28. R. Rhodes, *The Making of the Atomic Bomb*, Simon and Schuster, New York, (1988).
29. D.V. Babst et al., *Accidental Nuclear War: The Growing Peril*, Peace Research Institute, Dundas, Ontario, (1984).
30. S. Britten, *The Invisible Event: An Assessment of the Risk of Accidental or Unauthorized Detonation of Nuclear Weapons and of War by Miscalculation*, Menard Press, London, (1983).
31. M. Dando and P. Rogers, *The Death of Deterrence*, CND Publications, London, (1984).
32. N.F. Dixon, *On the Psychology of Military Incompetence*, Futura, London, (1976).
33. D. Frei and C. Catrina, *Risks of Unintentional Nuclear War*, United Nations, Geneva, (1982).
34. H. L'Etang, *Fit to Lead?*, Heinemann Medical, London, (1980).

35. SPANW, *Nuclear War by Mistake - Inevitable or Preventable?*, Swedish Physicians Against Nuclear War, Lulea, (1985).
36. J. Goldblat, *Nuclear Non-proliferation: The Why and the Wherefore*, (SIPRI Publications), Taylor and Francis, (1985).
37. J. Schear, ed., *Nuclear Weapons Proliferation and Nuclear Risk*, Gower, London, (1984).
38. D.P. Barash and J.E. Lipton, *Stop Nuclear War! A Handbook*, Grove Press, New York, (1982).
39. C.F. Barnaby and G.P. Thomas, eds., *The Nuclear Arms Race: Control or Catastrophe*, Francis Pinter, London, (1982).
40. L.R. Beres, *Apocalypse: Nuclear Catastrophe in World Politics*, Chicago University press, Chicago, IL, (1980).
41. F. Blackaby et al., eds., *No-first-use*, Taylor and Francis, London, (1984).
42. NS, ed., *New Statesman Papers on Destruction and Disarmament* (NS Report No. 3), New Statesman, London, (1981).
43. H. Caldicot, *Missile Envy: The Arms Race and Nuclear War*, William Morrow, New York, (1984).
44. R. Ehrlich, *Waging the Peace: The Technology and Politics of Nuclear Weapons*, State University of New York Press, Albany, NY, (1985).
45. W. Epstein, *The Prevention of Nuclear War: A United Nations Perspective*, Gunn and Hain, Cambridge, MA, (1984).
46. W. Epstein and T. Toyoda, eds., *A New Design for Nuclear Disarmament*, Spokesman, Nottingham, (1975).
47. G.F. Kennan, *The Nuclear Delusion*, Pantheon, New York, (1983).
48. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
49. J.R. Macy, *Despair and Personal Power in the Nuclear Age*, New Society Publishers, Philadelphia, PA, (1983).
50. A.S. Miller et al., eds., *Nuclear Weapons and Law*, Greenwood Press, Westport, CT, (1984).
51. MIT Coalition on Disarmament, eds., *The Nuclear Almanac: Confronting the Atom in War and Peace*, Addison-Wesley, Reading, MA, (1984).
52. UN, *Nuclear Weapons: Report of the Secretary-General of the United Nations*, United Nations, New York, (1980).
53. IC, *Proceedings of the Conference on Understanding Nuclear War*, Imperial College, London, (1980).
54. B. Russell, *Common Sense and Nuclear Warfare*, Allen and Unwin, London, (1959).
55. F. Barnaby, *The Nuclear Age*, Almqvist and Wiksell, Stockholm, (1974).
56. D. Albright, F. Berkhout and W. Walker, *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities and Policies*, Oxford University Press, Oxford, (1997).
57. G.T. Allison et al., *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material*, MIT Press, Cambridge MA, (1996).

58. B. Bailin, *The Making of the Indian Atomic Bomb: Science, Secrecy, and the Post-colonial State*, Zed Books, London, (1998).
59. P. Bidawi and A. Vanaik, *South Asia on a Short Fuse: Nuclear Politics and the Future of Global Disarmament*, Oxford University Press, Oxford, (2001).
60. F.A. Boyle, *The Criminality of Nuclear Deterrence: Could the U.S. War on Terrorism Go Nuclear?*, Clarity Press, Atlanta GA, (2002).
61. G. Burns, *The Atomic Papers: A Citizen's Guide to Selected Books and Articles on the Bomb, the Arms Race, Nuclear Power, the Peace Movement, and Related Issues*, Scarecrow Press, Metuchen NJ, (1984).
62. L. Butler, *A Voice of Reason*, The Bulletin of Atomic Scientists, **54**, 58-61, (1998).
63. R. Butler, *Fatal Choice: Nuclear Weapons and the Illusion of Missile Defense*, Westview Press, Boulder CO, (2001).
64. R.P. Carlisle (Ed.), *Encyclopedia of the Atomic Age*, Facts on File, New York, (2001).
65. G.A. Cheney, *Nuclear Proliferation: The Problems and Possibilities*, Franklin Watts, New York, (1999).
66. A. Cohen, *Israel and the Bomb*, Colombia University Press, New York, (1998).
67. S.J. Diehl and J.C. Moltz, *Nuclear Weapons and Nonproliferation: A Reference Handbook*, ABC-Clio Information Services, Santa Barbara CA, (2002).
68. H.A. Feiveson (Ed.), *The Nuclear Turning Point: A Blueprint for Deep Cuts and De-Alerting of Nuclear Weapons*, Brookings Institution Press, Washington D.C., (1999).
69. R. Hilsman, *From Nuclear Military Strategy to a World Without War: A History and a Proposal*, Praeger Publishers, Westport, (1999).
70. International Physicians for the Prevention of Nuclear War and The Institute for Energy and Environmental Research *Plutonium: Deadly Gold of the Nuclear Age*, International Physicians Press, Cambridge MA, (1992).
71. R.W. Jones and M.G. McDonough, *Tracking Nuclear Proliferation: A Guide in Maps and Charts, 1998*, The Carnegie Endowment for International Peace, Washington D.C., (1998).
72. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
73. R.E. Powaski, *March to Armageddon: The United States and the Nuclear Arms Race, 1939 to the Present*, Oxford University Press, (1987).
74. J. Rotblat, J. Steinberger and B. Udgaonkar (Eds.), *A Nuclear-Weapon-Free World: Desirable? Feasible?*, Westview Press, (1993).
75. The United Methodist Council of Bishops, *In Defense of Creation: The Nuclear Crisis and a Just Peace*, Graded Press, Nashville, (1986).
76. U.S. Congress Office of Technology Assessment (Ed.), *Dismantling the Bomb and Managing the Nuclear Materials*, U.S. Government Printing Office, Washington D.C., (1993).
77. S.R. Weart, *Nuclear Fear: A History of Images*, Harvard University Press, (1988).
78. P. Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*, University of North Carolina Press, (1985).

79. C. Perrow, *Normal Accidents: Living With High-Risk Technologies*, Basic Books, (1984).
80. P. Rogers, *The Risk of Nuclear Terrorism in Britain*, Oxford Research Group, Oxford, (2006).
81. MIT, *The Future of Nuclear Power: An Interdisciplinary MIT Study*, <http://web.mit.edu/nuclearpow> (2003).
82. Z. Mian and A. Glaser, *Life in a Nuclear Powered Crowd*, INES Newsletter No. 52, 9-13, April, (2006).
83. K. Bergeron, *Nuclear Weapons: The Death of No Dual-use*, Bulletin of the Atomic Scientists, 15-17, January, (2004).
84. E. Chivian, and others (eds.), *Last Aid: The Medical Dimensions of Nuclear War*, W.H. Freeman, San Fransisco, (1982).
85. Medical Association's Board of Science and Education, *The Medical Effects of Nuclear War*, Wiley, (1983).
86. Kevin Rudd, Prime Minister, Australia, "International Commission on Nuclear Non-Proliferation and Disarmament", Media Release, July 9, 2008.
87. Global Zero, www.globalzero.org/paris-conference
88. Helmut Schmidt, Richard von Weizäcker, Egon Bahr and Hans-Dietrich Genscher, "Towards a Nuclear-Free World: a German View", International Herald Tribune, January 9, 2009.
89. Hans M. Kristensen and Elliot Negin, "Support Growing for Removal of U.S. Nuclear Weapons from Europe", Common Dreams Newscenter, first posted May 6, 2005.
90. David Krieger, "President-elect Obama and a World Free of Nuclear Weapons", Nuclear Age Peace Foundation Website, 2008.
91. J.L. Henderson, *Hiroshima*, Longmans (1974).
92. A. Osada, *Children of the A-Bomb, The Testament of Boys and Girls of Hiroshima*, Putnam, New York (1963).
93. M. Hachiya, M.D., *Hiroshima Diary*, The University of North Carolina Press, Chapel Hill, N.C. (1955).
94. M. Yass, *Hiroshima*, G.P. Putnam's Sons, New York (1972).
95. R. Jungk, *Children of the Ashes*, Harcourt, Brace and World (1961).
96. B. Hirschfield, *A Cloud Over Hiroshima*, Baily Brothers and Swinfin Ltd. (1974).
97. J. Hersey, *Hiroshima*, Penguin Books Ltd. (1975).
98. R. Rhodes, *Dark Sun: The Making of the Hydrogen Bomb*, Simon and Schuster, New York, (1995)
99. R. Rhodes, *The Making of the Atomic Bomb*, Simon and Schuster, New York, (1988).
100. D.V. Babst et al., *Accidental Nuclear War: The Growing Peril*, Peace Research Institute, Dundas, Ontario, (1984).
101. S. Britten, *The Invisible Event: An Assessment of the Risk of Accidental or Unauthorized Detonation of Nuclear Weapons and of War by Miscalculation*, Menard Press, London, (1983).
102. M. Dando and P. Rogers, *The Death of Deterrence*, CND Publications, London, (1984).

103. N.F. Dixon, *On the Psychology of Military Incompetence*, Futura, London, (1976).
104. D. Frei and C. Catrina, *Risks of Unintentional Nuclear War*, United Nations, Geneva, (1982).
105. H. L'Etang, *Fit to Lead?*, Heinemann Medical, London, (1980).
106. SPANW, *Nuclear War by Mistake - Inevitable or Preventable?*, Swedish Physicians Against Nuclear War, Lulea, (1985).
107. J. Goldblat, *Nuclear Non-proliferation: The Why and the Wherefore*, (SIPRI Publications), Taylor and Francis, (1985).
108. IAEA, *International Safeguards and the Non-proliferation of Nuclear Weapons*, International Atomic Energy Agency, Vienna, (1985).
109. J. Schear, ed., *Nuclear Weapons Proliferation and Nuclear Risk*, Gower, London, (1984).
110. D.P. Barash and J.E. Lipton, *Stop Nuclear War! A Handbook*, Grove Press, New York, (1982).
111. C.F. Barnaby and G.P. Thomas, eds., *The Nuclear Arms Race: Control or Catastrophe*, Francis Pinter, London, (1982).
112. L.R. Beres, *Apocalypse: Nuclear Catastrophe in World Politics*, Chicago University press, Chicago, IL, (1980).
113. F. Blackaby et al., eds., *No-first-use*, Taylor and Francis, London, (1984).
114. NS, ed., *New Statesman Papers on Destruction and Disarmament* (NS Report No. 3), New Statesman, London, (1981).
115. H. Caldicot, *Missile Envy: The Arms Race and Nuclear War*, William Morrow, New York, (1984).
116. R. Ehrlich, *Waging the Peace: The Technology and Politics of Nuclear Weapons*, State University of New York Press, Albany, NY, (1985).
117. W. Epstein, *The Prevention of Nuclear War: A United Nations Perspective*, Gunn and Hain, Cambridge, MA, (1984).
118. W. Epstein and T. Toyoda, eds., *A New Design for Nuclear Disarmament*, Spokesman, Nottingham, (1975).
119. G.F. Kennan, *The Nuclear Delusion*, Pantheon, New York, (1983).
120. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
121. J.R. Macy, *Despair and Personal Power in the Nuclear Age*, New Society Publishers, Philadelphia, PA, (1983).
122. A.S. Miller et al., eds., *Nuclear Weapons and Law*, Greenwood Press, Westport, CT, (1984).
123. MIT Coalition on Disarmament, eds., *The Nuclear Almanac: Confronting the Atom in War and Peace*, Addison-Wesley, Reading, MA, (1984).
124. UN, *Nuclear Weapons: Report of the Secretary-General of the United Nations*, United Nations, New York, (1980).
125. IC, *Proceedings of the Conference on Understanding Nuclear War*, Imperial College, London, (1980).
126. B. Russell, *Common Sense and Nuclear Warfare*, Allen and Unwin, London, (1959).

127. F. Barnaby, *The Nuclear Age*, Almqvist and Wiksell, Stockholm, (1974).
128. D. Albright, F. Berkhout and W. Walker, *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities and Policies*, Oxford University Press, Oxford, (1997).
129. G.T. Allison et al., *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material*, MIT Press, Cambridge MA, (1996).
130. B. Bailin, *The Making of the Indian Atomic Bomb: Science, Secrecy, and the Post-colonial State*, Zed Books, London, (1998).
131. G.K. Bertsch and S.R. Grillot, (Eds.), *Arms on the Market: Reducing the Risks of Proliferation in the Former Soviet Union*, Routledge, New York, (1998).
132. P. Bidawi and A. Vanaik, *South Asia on a Short Fuse: Nuclear Politics and the Future of Global Disarmament*, Oxford University Press, Oxford, (2001).
133. F.A. Boyle, *The Criminality of Nuclear Deterrence: Could the U.S. War on Terrorism Go Nuclear?*, Clarity Press, Atlanta GA, (2002).
134. G. Burns, *The Atomic Papers: A Citizen's Guide to Selected Books and Articles on the Bomb, the Arms Race, Nuclear Power, the Peace Movement, and Related Issues*, Scarecrow Press, Metuchen NJ, (1984).
135. L. Butler, *A Voice of Reason*, The Bulletin of Atomic Scientists, **54**, 58-61, (1998).
136. R. Butler, *Fatal Choice: Nuclear Weapons and the Illusion of Missile Defense*, Westview Press, Boulder CO, (2001).
137. R.P. Carlisle (Ed.), *Encyclopedia of the Atomic Age*, Facts on File, New York, (2001).
138. G.A. Cheney, *Nuclear Proliferation: The Problems and Possibilities*, Franklin Watts, New York, (1999).
139. A. Cohen, *Israel and the Bomb*, Colombia University Press, New York, (1998).
140. S.J. Diehl and J.C. Moltz, *Nuclear Weapons and Nonproliferation: A Reference Handbook*, ABC-Clio Information Services, Santa Barbara CA, (2002).
141. H.A. Feiveson (Ed.), *The Nuclear Turning Point: A Blueprint for Deep Cuts and De-alerting of Nuclear Weapons*, Brookings Institution Press, Washington D.C., (1999).
142. R. Hilsman, *From Nuclear Military Strategy to a World Without War: A History and a Proposal*, Praeger Publishers, Westport, (1999).
143. International Physicians for the Prevention of Nuclear War and The Institute for Energy and Environmental Research *Plutonium: Deadly Gold of the Nuclear Age*, International Physicians Press, Cambridge MA, (1992).
144. R.W. Jones and M.G. McDonough, *Tracking Nuclear Proliferation: A Guide in Maps and Charts, 1998*, The Carnegie Endowment for International Peace, Washington D.C., (1998).
145. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
146. J. Rotblat, J. Steinberger and B. Udgaonkar (Eds.), *A Nuclear-Weapon-Free World: Desirable? Feasible?*, Westview Press, (1993).
147. The United Methodist Council of Bishops, *In Defense of Creation: The Nuclear Crisis and a Just Peace*, Graded Press, Nashville, (1986).

148. U.S. Congress Office of Technology Assessment (Ed.), *Dismantling the Bomb and Managing the Nuclear Materials*, U.S. Government Printing Office, Washington D.C., (1993).
149. S.R. Weart, *Nuclear Fear: A History of Images*, Harvard University Press, (1988).
150. P. Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*, University of North Carolina Press, (1985).
151. A. Makhijani and S. Saleska, *The Nuclear Power Deception: Nuclear Mythology From Electricity 'Too Cheap to Meter' to 'Inherently Safe' Reactors*, Apex Press, (1999).
152. C. Perrow, *Normal Accidents: Living With High-Risk Technologies*, Basic Books, (1984).
153. P. Rogers, *The Risk of Nuclear Terrorism in Britain*, Oxford Research Group, Oxford, (2006).
154. MIT, *The Future of Nuclear Power: An Interdisciplinary MIT Study*, <http://web.mit.edu/nuclearpow> (2003).
155. Z. Mian and A. Glaser, *Life in a Nuclear Powered Crowd*, INES Newsletter No. 52, 9-13, April, (2006).
156. E. Chivian, and others (eds.), *Last Aid: The Medical Dimensions of Nuclear War*, W.H. Freeman, San Fransisco, (1982).
157. G. Kolko, "Another Century of War", New Press, (2002).
158. G. Kolko, "Confronting the Third World: United States Foreign Policy, 1945-1980", Pantheon Books, (1988).
159. John A. Hobson, "Imperialism; A Study", (1902).
160. M.T. Klare, "Resource Wars: The New Landscape of Global Conflict", Owl Books reprint edition, New York, (2002).

Chapter 7

THE ARMS RACE

7.1 The arms race prior to World War 1

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 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

¹International Encyclopedia of the First World War

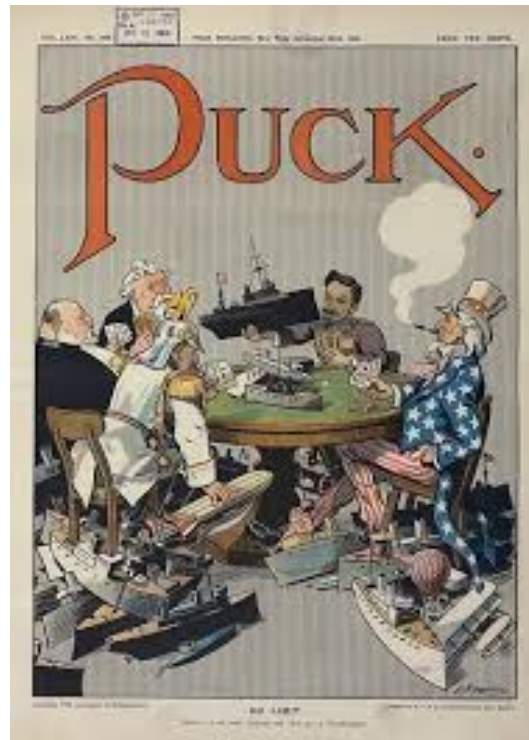


Figure 7.1: Left to right, US, Britain, Germany, France and Japan, engage in a “no limits” game for naval supremacy.

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.”

7.2 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.



Figure 7.2: Map of European colonies in Africa in 1914, just before the First World War. Source: www.createdebate.com

7.3 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 7.3: 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

7.4 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

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."

7.5 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).



Figure 7.4: **An arms race between the major European powers contributed to the start of World War I.**

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

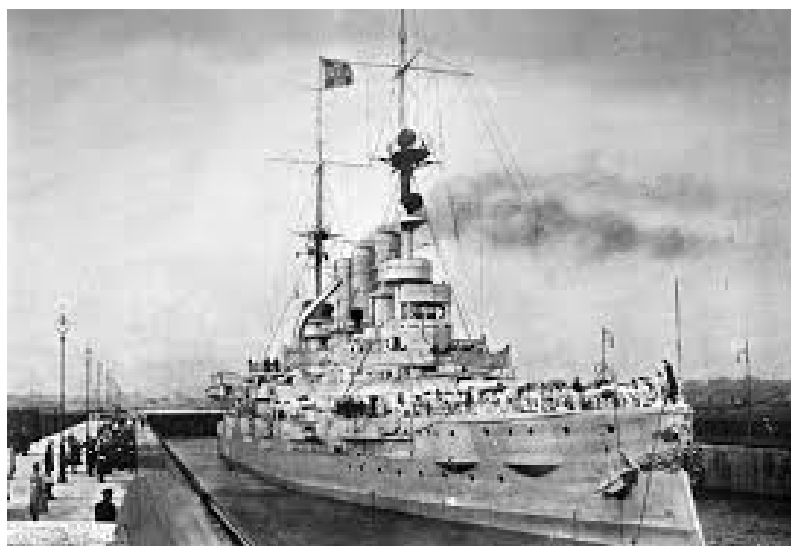


Figure 7.6: The naval arms race, which contributed to the start of World War I, enriched steel manufacturers and military shipbuilders.



Figure 7.7: Who is the leader, and who the follower?

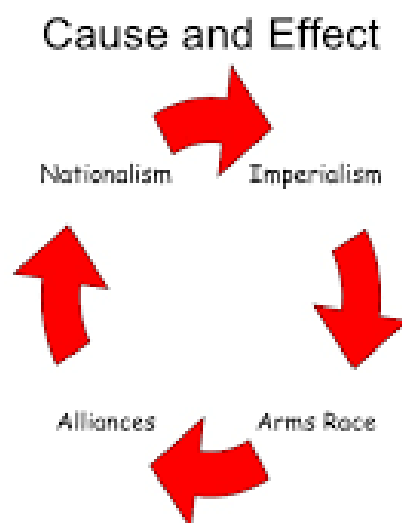


Figure 7.8: A vicious circle.



Figure 7.9: Ready, set, go!

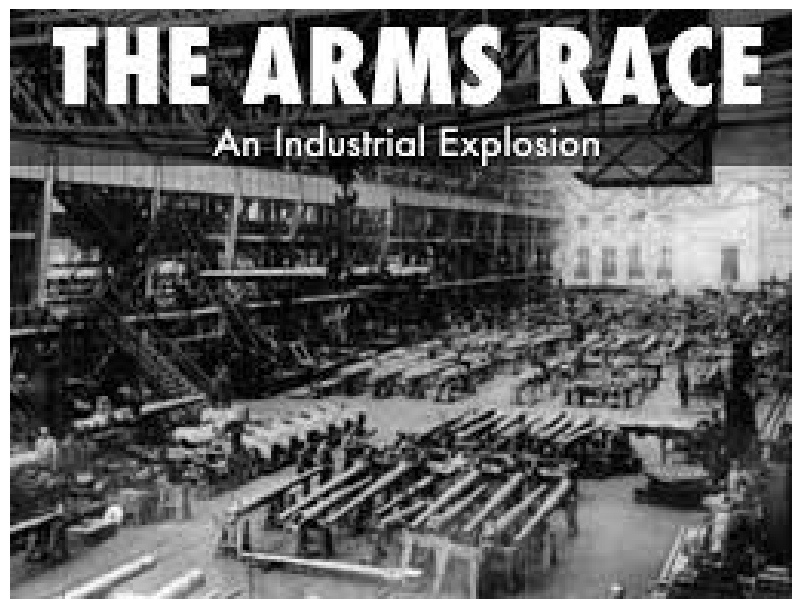


Figure 7.10: If our economies depend on armaments industries, it is an unhealthy dependence, analogous to drug addiction.



Figure 7.11: The nuclear arms race casts a dark shadow over the future of human civilization and the biosphere.



Figure 7.12: During the Cuban Missile Crisis, the world came close to a catastrophic thermonuclear war.

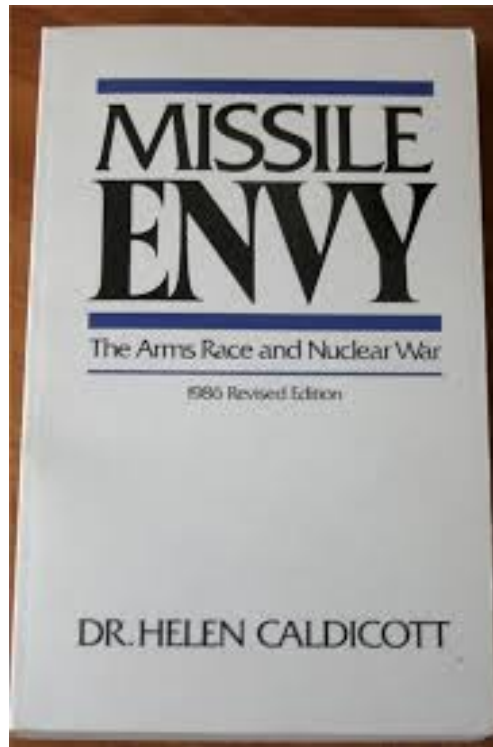


Figure 7.13: Dr. Helen Caldecott has worked to document the dangers of both nuclear weapons and nuclear power generation.



Figure 7.14: We must listen to the wise words of Dr. Martin Luther King, Jr.

7.6 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.

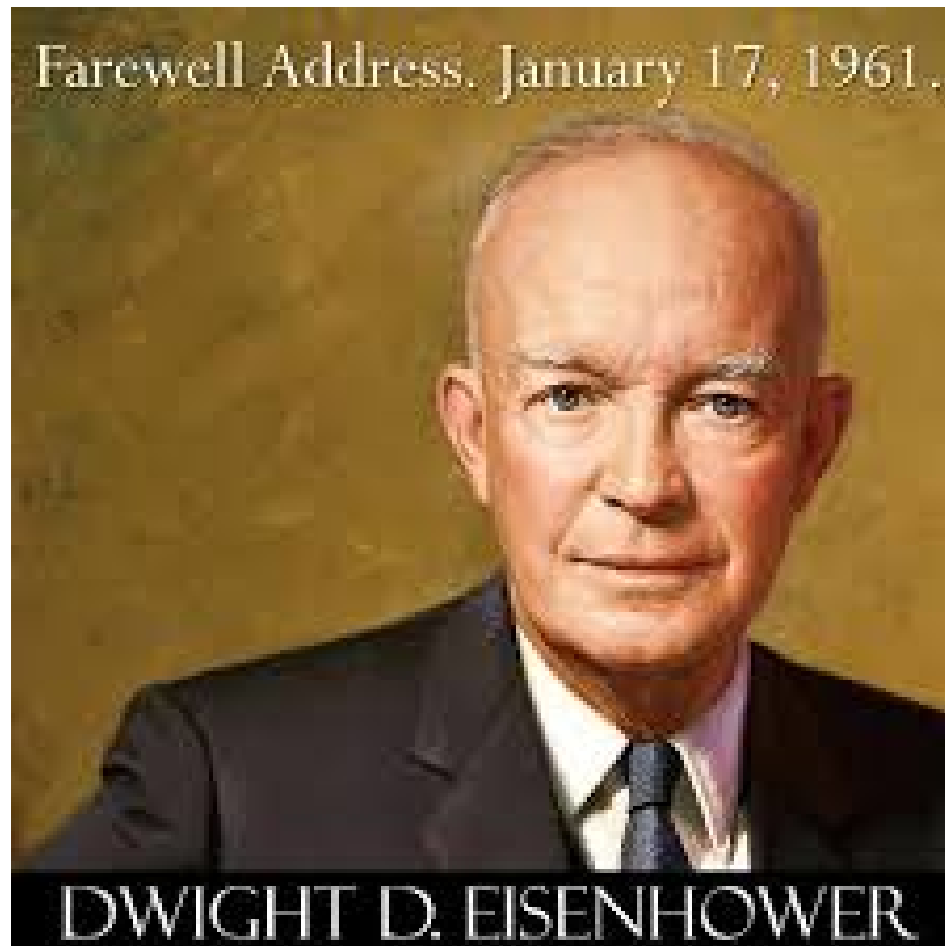


Figure 7.15: “In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the Military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.”

7.7 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

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.

7.8 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.

7.9 Military-industrial complexes today

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

In an interview with Amy Goodman¹⁰, 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 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!”

<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/>

¹⁰<https://genius.com/General-wesley-clark-seven-countries-in-five-years-annotated>



Figure 7.16: General Wesley Clark

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, Eritiria, 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

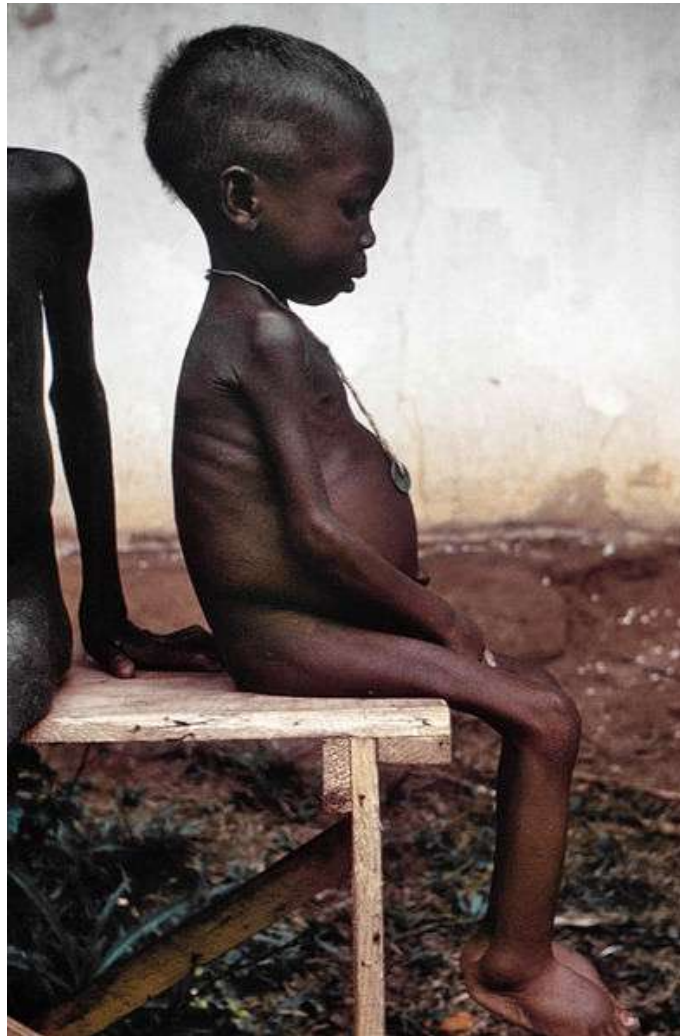


Figure 7.17: 40,000 children die each day from starvation or from poverty-related diseases. Meanwhile, the world spends roughly \$2,000,000,000,000 each year on armaments.

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:

"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

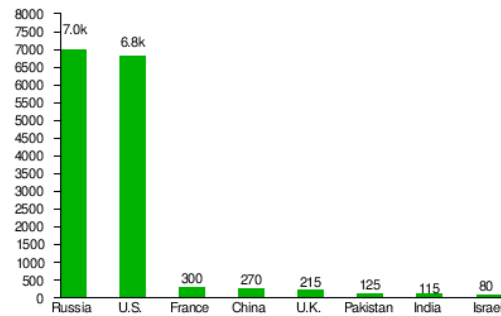


Figure 7.18: Countries by estimated nuclear warhead stockpiles according to the Federation of American scientists.



Figure 7.19: 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.

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 7.1: **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 7.2: **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

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?"



Figure 7.20: Tom Cruse in “Top Gun”.



Figure 7.21: A culture of violence supports the Devil’s Dynamo.

7.10 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

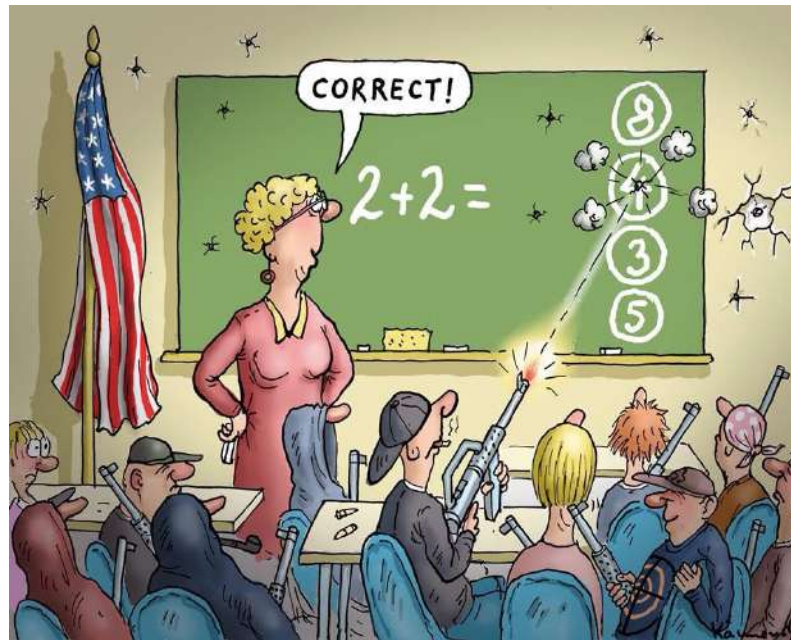


Figure 7.22: **A culture of violence:** In the United States the National Rifle Association has proposed guns in schools as the answer to the epidemic of school shootings.

- 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).

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

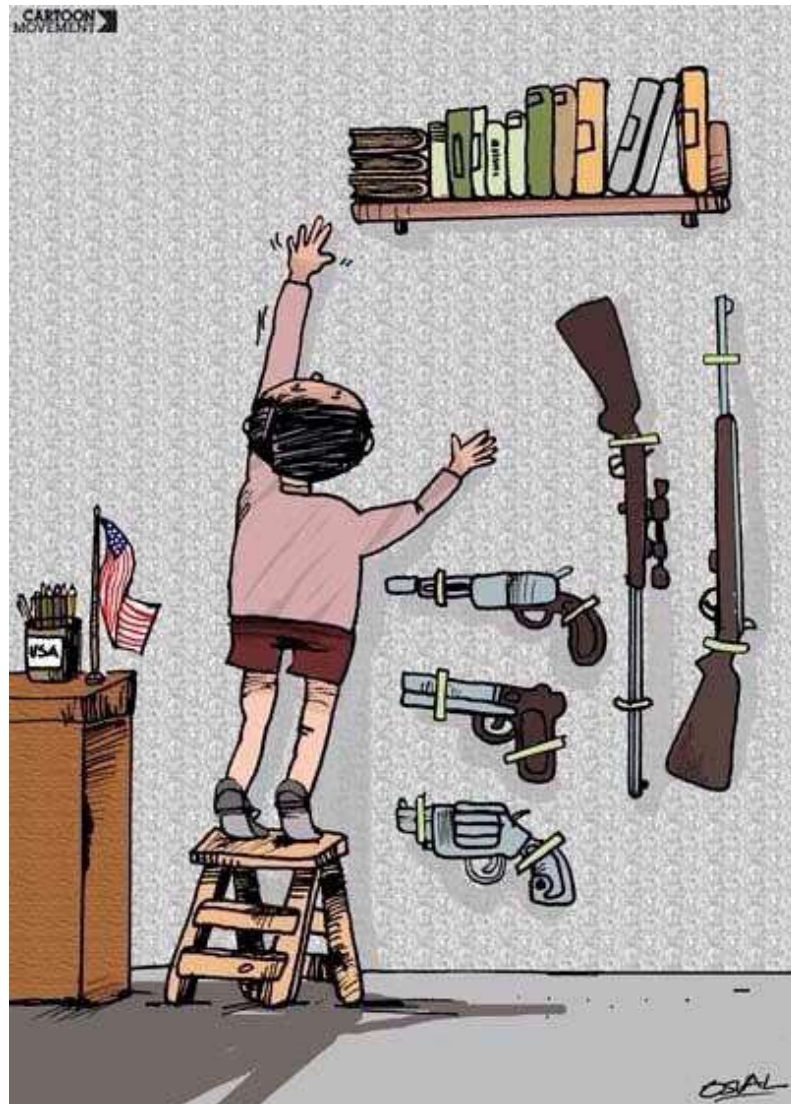


Figure 7.23: A culture of violence. Guns in schools?

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.

Suggestions for further reading

1. A. Robock, L. Oman, G. L. Stenchikov, O. B. Toon, C. Bardeen, and R. Turco, *Climatic consequences of regional nuclear conflicts*, Atmospheric Chemistry and Physics, Vol. 7, p. 2003-2012, (2007).
2. M. Mills, O. Toon, R. Turco, D. Kinnison, R. Garcia, *Massive global ozone loss predicted following regional nuclear conflict*, Proceedings of the National Academy of Sciences (USA), vol. 105(14), pp. 5307-12, Apr 8, (2008).
3. O. Toon, A. Robock, and R. Turco, *The Environmental Consequences of Nuclear War*, Physics Today, vol. 61, No. 12, p. 37-42, (2008).
4. R. Turco, O. Toon, T. Ackermann, J. Pollack, and C. Sagan, *Nuclear Winter: Global consequences of multiple nuclear explosions*, Science, Vol. 222, No. 4630, pp. 1283-1292, December (1983).
5. A. Robock, L. Oman, G. Stenchikov, *Nuclear winter revisited with a modern climate model and current nuclear arsenals: Still catastrophic consequences*, Journal of Geophysical Research - Atmospheres, Vol. 112, No. D13, p. 4 of 14, (2007).
6. I. Helfand, *An Assessment of the Extent of Projected Global Famine Resulting From Limited, Regional Nuclear War*, International Physicians for the Prevention of Nuclear War, Physicians for Social Responsibility, Leeds, MA, (2007).
7. George P. Schultz, William J. Perry, Henry A. Kissinger and Sam Nunn, *A World Free of Nuclear Weapons*, The Wall Street Journal, January 4, 2007, page A15 and January 15, (2008), page A15.
8. Mikhail Gorbachev, *The Nuclear Threat*, The Wall Street Journal, January 30, (2007), page A15.
9. Massimo D'Alema, Gianfranco Fini, Giorgio La Malfa, Arturo Parisi and Francesco Calogero, *For a World Free of Nuclear Weapons*, Corriere Della Sera, July 24, (2008).
10. Hoover Institution, *Reykjavik Revisited; Steps Towards a World Free of Nuclear Weapons*, October, (2007).
11. Douglas Hurd, Malcolm Rifkind, David Owen and George Robertson, *Start Worrying and Learn to Ditch the Bomb*, The Times, June 30, (2008).
12. Des Brown, Secretary of State for Defense, UK, *Laying the Foundations for Multilateral Disarmament*, Geneva Conference on Disarmament, February 5, (2008).
13. Government of Norway, International Conference on *Achieving the Vision of a World Free of Nuclear Weapons*, Oslo, Norway, February 26-27, (2008).
14. Jonas Gahr Støre, Foreign Minister, Norway, *Statement at the Conference on Disarmament*, Geneva, March 4, (2008).
15. Anne-Grete Strøm-Erichsen, Defense Minister, Norway, *Emerging Opportunities for Nuclear Disarmament*, Pugwash Conference, Canada, July 11, (2008).
16. Kevin Rudd, Prime Minister, Australia, *International Commission on Nuclear Non-Proliferation and Disarmament*, Media Release, July 9, (2008).
17. Helmut Schmidt, Richard von Weizsäcker, Egon Bahr and Hans-Dietrich Genscher, *Towards a Nuclear-Free World: a German View*, International Herald Tribune, January 9, (2009).

18. Hans M. Kristensen and Elliot Negin, *Support Growing for Removal of U.S. Nuclear Weapons from Europe*, Common Dreams Newscenter, first posted May 6, (2005).
19. David Krieger, *President-elect Obama and a World Free of Nuclear Weapons*, Nuclear Age Peace Foundation Website, (2008).
20. J.L. Henderson, *Hiroshima*, Longmans (1974).
21. A. Osada, *Children of the A-Bomb, The Testament of Boys and Girls of Hiroshima*, Putnam, New York (1963).
22. M. Hachiya, M.D., *Hiroshima Diary*, The University of North Carolina Press, Chapel Hill, N.C. (1955).
23. M. Yass, *Hiroshima*, G.P. Putnam's Sons, New York (1972).
24. R. Jungk, *Children of the Ashes*, Harcourt, Brace and World (1961).
25. B. Hirschfield, *A Cloud Over Hiroshima*, Baily Brothers and Swinfin Ltd. (1974).
26. J. Hersey, *Hiroshima*, Penguin Books Ltd. (1975).
27. R. Rhodes, *Dark Sun: The Making of the Hydrogen Bomb*, Simon and Schuster, New York, (1995)
28. R. Rhodes, *The Making of the Atomic Bomb*, Simon and Schuster, New York, (1988).
29. D.V. Babst et al., *Accidental Nuclear War: The Growing Peril*, Peace Research Institute, Dundas, Ontario, (1984).
30. S. Britten, *The Invisible Event: An Assessment of the Risk of Accidental or Unauthorized Detonation of Nuclear Weapons and of War by Miscalculation*, Menard Press, London, (1983).
31. M. Dando and P. Rogers, *The Death of Deterrence*, CND Publications, London, (1984).
32. N.F. Dixon, *On the Psychology of Military Incompetence*, Futura, London, (1976).
33. D. Frei and C. Catrina, *Risks of Unintentional Nuclear War*, United Nations, Geneva, (1982).
34. H. L'Etang, *Fit to Lead?*, Heinemann Medical, London, (1980).
35. SPANW, *Nuclear War by Mistake - Inevitable or Preventable?*, Swedish Physicians Against Nuclear War, Lulea, (1985).
36. J. Goldblat, *Nuclear Non-proliferation: The Why and the Wherefore*, (SIPRI Publications), Taylor and Francis, (1985).
37. J. Schear, ed., *Nuclear Weapons Proliferation and Nuclear Risk*, Gower, London, (1984).
38. D.P. Barash and J.E. Lipton, *Stop Nuclear War! A Handbook*, Grove Press, New York, (1982).
39. C.F. Barnaby and G.P. Thomas, eds., *The Nuclear Arms Race: Control or Catastrophe*, Francis Pinter, London, (1982).
40. L.R. Beres, *Apocalypse: Nuclear Catastrophe in World Politics*, Chicago University press, Chicago, IL, (1980).
41. F. Blackaby et al., eds., *No-first-use*, Taylor and Francis, London, (1984).
42. NS, ed., *New Statesman Papers on Destruction and Disarmament* (NS Report No. 3), New Statesman, London, (1981).

43. H. Caldicot, *Missile Envy: The Arms Race and Nuclear War*, William Morrow, New York, (1984).
44. R. Ehrlich, *Waging the Peace: The Technology and Politics of Nuclear Weapons*, State University of New York Press, Albany, NY, (1985).
45. W. Epstein, *The Prevention of Nuclear War: A United Nations Perspective*, Gunn and Hain, Cambridge, MA, (1984).
46. W. Epstein and T. Toyoda, eds., *A New Design for Nuclear Disarmament*, Spokesman, Nottingham, (1975).
47. G.F. Kennan, *The Nuclear Delusion*, Pantheon, New York, (1983).
48. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
49. J.R. Macy, *Despair and Personal Power in the Nuclear Age*, New Society Publishers, Philadelphia, PA, (1983).
50. A.S. Miller et al., eds., *Nuclear Weapons and Law*, Greenwood Press, Westport, CT, (1984).
51. MIT Coalition on Disarmament, eds., *The Nuclear Almanac: Confronting the Atom in War and Peace*, Addison-Wesley, Reading, MA, (1984).
52. UN, *Nuclear Weapons: Report of the Secretary-General of the United Nations*, United Nations, New York, (1980).
53. IC, *Proceedings of the Conference on Understanding Nuclear War*, Imperial College, London, (1980).
54. B. Russell, *Common Sense and Nuclear Warfare*, Allen and Unwin, London, (1959).
55. F. Barnaby, *The Nuclear Age*, Almqvist and Wiksell, Stockholm, (1974).
56. D. Albright, F. Berkhout and W. Walker, *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities and Policies*, Oxford University Press, Oxford, (1997).
57. G.T. Allison et al., *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material*, MIT Press, Cambridge MA, (1996).
58. B. Bailin, *The Making of the Indian Atomic Bomb: Science, Secrecy, and the Post-colonial State*, Zed Books, London, (1998).
59. P. Bidawi and A. Vanaik, *South Asia on a Short Fuse: Nuclear Politics and the Future of Global Disarmament*, Oxford University Press, Oxford, (2001).
60. F.A. Boyle, *The Criminality of Nuclear Deterrence: Could the U.S. War on Terrorism Go Nuclear?*, Clarity Press, Atlanta GA, (2002).
61. G. Burns, *The Atomic Papers: A Citizen's Guide to Selected Books and Articles on the Bomb, the Arms Race, Nuclear Power, the Peace Movement, and Related Issues*, Scarecrow Press, Metuchen NJ, (1984).
62. L. Butler, *A Voice of Reason*, The Bulletin of Atomic Scientists, **54**, 58-61, (1998).
63. R. Butler, *Fatal Choice: Nuclear Weapons and the Illusion of Missile Defense*, Westview Press, Boulder CO, (2001).
64. R.P. Carlisle (Ed.), *Encyclopedia of the Atomic Age*, Facts on File, New York, (2001).
65. G.A. Cheney, *Nuclear Proliferation: The Problems and Possibilities*, Franklin Watts, New York, (1999).

66. A. Cohen, *Israel and the Bomb*, Colombia University Press, New York, (1998).
67. S.J. Diehl and J.C. Moltz, *Nuclear Weapons and Nonproliferation: A Reference Handbook*, ABC-Clio Information Services, Santa Barbara CA, (2002).
68. H.A. Feiveson (Ed.), *The Nuclear Turning Point: A Blueprint for Deep Cuts and De-Alerting of Nuclear Weapons*, Brookings Institution Press, Washington D.C., (1999).
69. R. Hilsman, *From Nuclear Military Strategy to a World Without War: A History and a Proposal*, Praeger Publishers, Westport, (1999).
70. International Physicians for the Prevention of Nuclear War and The Institute for Energy and Environmental Research *Plutonium: Deadly Gold of the Nuclear Age*, International Physicians Press, Cambridge MA, (1992).
71. R.W. Jones and M.G. McDonough, *Tracking Nuclear Proliferation: A Guide in Maps and Charts, 1998*, The Carnegie Endowment for International Peace, Washington D.C., (1998).
72. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
73. R.E. Powaski, *March to Armageddon: The United States and the Nuclear Arms Race, 1939 to the Present*, Oxford University Press, (1987).
74. J. Rotblat, J. Steinberger and B. Udgaonkar (Eds.), *A Nuclear-Weapon-Free World: Desirable? Feasible?*, Westview Press, (1993).
75. The United Methodist Council of Bishops, *In Defense of Creation: The Nuclear Crisis and a Just Peace*, Graded Press, Nashville, (1986).
76. U.S. Congress Office of Technology Assessment (Ed.), *Dismantling the Bomb and Managing the Nuclear Materials*, U.S. Government Printing Office, Washington D.C., (1993).
77. S.R. Weart, *Nuclear Fear: A History of Images*, Harvard University Press, (1988).
78. P. Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*, University of North Carolina Press, (1985).
79. C. Perrow, *Normal Accidents: Living With High-Risk Technologies*, Basic Books, (1984).
80. P. Rogers, *The Risk of Nuclear Terrorism in Britain*, Oxford Research Group, Oxford, (2006).
81. MIT, *The Future of Nuclear Power: An Interdisciplinary MIT Study*, <http://web.mit.edu/nuclearpow> (2003).
82. Z. Mian and A. Glaser, *Life in a Nuclear Powered Crowd*, INES Newsletter No. 52, 9-13, April, (2006).
83. K. Bergeron, *Nuclear Weapons: The Death of No Dual-use*, Bulletin of the Atomic Scientists, 15-17, January, (2004).
84. E. Chivian, and others (eds.), *Last Aid: The Medical Dimensions of Nuclear War*, W.H. Freeman, San Fransisco, (1982).
85. Medical Association's Board of Science and Education, *The Medical Effects of Nuclear War*, Wiley, (1983).

86. Kevin Rudd, Prime Minister, Australia, "International Commission on Nuclear Non-Proliferation and Disarmament", Media Release, July 9, 2008.
87. Global Zero, www.globalzero.org/paris-conference
88. Helmut Schmidt, Richard von Weizsäcker, Egon Bahr and Hans-Dietrich Genscher, "Towards a Nuclear-Free World: a German View", International Herald Tribune, January 9, 2009.
89. Hans M. Kristensen and Elliot Negin, "Support Growing for Removal of U.S. Nuclear Weapons from Europe", Common Dreams Newscenter, first posted May 6, 2005.
90. David Krieger, "President-elect Obama and a World Free of Nuclear Weapons", Nuclear Age Peace Foundation Website, 2008.
91. J.L. Henderson, *Hiroshima*, Longmans (1974).
92. A. Osada, *Children of the A-Bomb, The Testament of Boys and Girls of Hiroshima*, Putnam, New York (1963).
93. M. Hachiya, M.D., *Hiroshima Diary*, The University of North Carolina Press, Chapel Hill, N.C. (1955).
94. M. Yass, *Hiroshima*, G.P. Putnam's Sons, New York (1972).
95. R. Jungk, *Children of the Ashes*, Harcourt, Brace and World (1961).
96. B. Hirschfield, *A Cloud Over Hiroshima*, Baily Brothers and Swinfin Ltd. (1974).
97. J. Hersey, *Hiroshima*, Penguin Books Ltd. (1975).
98. R. Rhodes, *Dark Sun: The Making of the Hydrogen Bomb*, Simon and Schuster, New York, (1995)
99. R. Rhodes, *The Making of the Atomic Bomb*, Simon and Schuster, New York, (1988).
100. D.V. Babst et al., *Accidental Nuclear War: The Growing Peril*, Peace Research Institute, Dundas, Ontario, (1984).
101. S. Britten, *The Invisible Event: An Assessment of the Risk of Accidental or Unauthorized Detonation of Nuclear Weapons and of War by Miscalculation*, Menard Press, London, (1983).
102. M. Dando and P. Rogers, *The Death of Deterrence*, CND Publications, London, (1984).
103. N.F. Dixon, *On the Psychology of Military Incompetence*, Futura, London, (1976).
104. D. Frei and C. Catrina, *Risks of Unintentional Nuclear War*, United Nations, Geneva, (1982).
105. H. L'Etang, *Fit to Lead?*, Heinemann Medical, London, (1980).
106. SPANW, *Nuclear War by Mistake - Inevitable or Preventable?*, Swedish Physicians Against Nuclear War, Lulea, (1985).
107. J. Goldblat, *Nuclear Non-proliferation: The Why and the Wherefore*, (SIPRI Publications), Taylor and Francis, (1985).
108. IAEA, *International Safeguards and the Non-proliferation of Nuclear Weapons*, International Atomic Energy Agency, Vienna, (1985).
109. J. Schear, ed., *Nuclear Weapons Proliferation and Nuclear Risk*, Gower, London, (1984).
110. D.P. Barash and J.E. Lipton, *Stop Nuclear War! A Handbook*, Grove Press, New York, (1982).

111. C.F. Barnaby and G.P. Thomas, eds., *The Nuclear Arms Race: Control or Catastrophe*, Francis Pinter, London, (1982).
112. L.R. Beres, *Apocalypse: Nuclear Catastrophe in World Politics*, Chicago University press, Chicago, IL, (1980).
113. F. Blackaby et al., eds., *No-first-use*, Taylor and Francis, London, (1984).
114. NS, ed., *New Statesman Papers on Destruction and Disarmament* (NS Report No. 3), New Statesman, London, (1981).
115. H. Caldicot, *Missile Envy: The Arms Race and Nuclear War*, William Morrow, New York, (1984).
116. R. Ehrlich, *Waging the Peace: The Technology and Politics of Nuclear Weapons*, State University of New York Press, Albany, NY, (1985).
117. W. Epstein, *The Prevention of Nuclear War: A United Nations Perspective*, Gunn and Hain, Cambridge, MA, (1984).
118. W. Epstein and T. Toyoda, eds., *A New Design for Nuclear Disarmament*, Spokesman, Nottingham, (1975).
119. G.F. Kennan, *The Nuclear Delusion*, Pantheon, New York, (1983).
120. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
121. J.R. Macy, *Despair and Personal Power in the Nuclear Age*, New Society Publishers, Philadelphia, PA, (1983).
122. A.S. Miller et al., eds., *Nuclear Weapons and Law*, Greenwood Press, Westport, CT, (1984).
123. MIT Coalition on Disarmament, eds., *The Nuclear Almanac: Confronting the Atom in War and Peace*, Addison-Wesley, Reading, MA, (1984).
124. UN, *Nuclear Weapons: Report of the Secretary-General of the United Nations*, United Nations, New York, (1980).
125. IC, *Proceedings of the Conference on Understanding Nuclear War*, Imperial College, London, (1980).
126. B. Russell, *Common Sense and Nuclear Warfare*, Allen and Unwin, London, (1959).
127. F. Barnaby, *The Nuclear Age*, Almqvist and Wiksell, Stockholm, (1974).
128. D. Albright, F. Berkhout and W. Walker, *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities and Policies*, Oxford University Press, Oxford, (1997).
129. G.T. Allison et al., *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material*, MIT Press, Cambridge MA, (1996).
130. B. Bailin, *The Making of the Indian Atomic Bomb: Science, Secrecy, and the Post-colonial State*, Zed Books, London, (1998).
131. G.K. Bertsch and S.R. Grillot, (Eds.), *Arms on the Market: Reducing the Risks of Proliferation in the Former Soviet Union*, Routledge, New York, (1998).
132. P. Bidawi and A. Vanaik, *South Asia on a Short Fuse: Nuclear Politics and the Future of Global Disarmament*, Oxford University Press, Oxford, (2001).
133. F.A. Boyle, *The Criminality of Nuclear Deterrence: Could the U.S. War on Terrorism Go Nuclear?*, Clarity Press, Atlanta GA, (2002).

134. G. Burns, *The Atomic Papers: A Citizen's Guide to Selected Books and Articles on the Bomb, the Arms Race, Nuclear Power, the Peace Movement, and Related Issues*, Scarecrow Press, Metuchen NJ, (1984).
135. L. Butler, *A Voice of Reason*, The Bulletin of Atomic Scientists, **54**, 58-61, (1998).
136. R. Butler, *Fatal Choice: Nuclear Weapons and the Illusion of Missile Defense*, Westview Press, Boulder CO, (2001).
137. R.P. Carlisle (Ed.), *Encyclopedia of the Atomic Age*, Facts on File, New York, (2001).
138. G.A. Cheney, *Nuclear Proliferation: The Problems and Possibilities*, Franklin Watts, New York, (1999).
139. A. Cohen, *Israel and the Bomb*, Colombia University Press, New York, (1998).
140. S.J. Diehl and J.C. Moltz, *Nuclear Weapons and Nonproliferation: A Reference Handbook*, ABC-Clio Information Services, Santa Barbara CA, (2002).
141. H.A. Feiveson (Ed.), *The Nuclear Turning Point: A Blueprint for Deep Cuts and De-alerting of Nuclear Weapons*, Brookings Institution Press, Washington D.C., (1999).
142. R. Hilsman, *From Nuclear Military Strategy to a World Without War: A History and a Proposal*, Praeger Publishers, Westport, (1999).
143. International Physicians for the Prevention of Nuclear War and The Institute for Energy and Environmental Research *Plutonium: Deadly Gold of the Nuclear Age*, International Physicians Press, Cambridge MA, (1992).
144. R.W. Jones and M.G. McDonough, *Tracking Nuclear Proliferation: A Guide in Maps and Charts, 1998*, The Carnegie Endowment for International Peace, Washington D.C., (1998).
145. R.J. Lifton and R. Falk, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism*, Basic Books, New York, (1982).
146. J. Rotblat, J. Steinberger and B. Udgaonkar (Eds.), *A Nuclear-Weapon-Free World: Desirable? Feasible?*, Westview Press, (1993).
147. The United Methodist Council of Bishops, *In Defense of Creation: The Nuclear Crisis and a Just Peace*, Graded Press, Nashville, (1986).
148. U.S. Congress Office of Technology Assessment (Ed.), *Dismantling the Bomb and Managing the Nuclear Materials*, U.S. Government Printing Office, Washington D.C., (1993).
149. S.R. Weart, *Nuclear Fear: A History of Images*, Harvard University Press, (1988).
150. P. Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*, University of North Carolina Press, (1985).
151. A. Makhijani and S. Saleska, *The Nuclear Power Deception: Nuclear Mythology From Electricity 'Too Cheap to Meter' to 'Inherently Safe' Reactors*, Apex Press, (1999).
152. C. Perrow, *Normal Accidents: Living With High-Risk Technologies*, Basic Books, (1984).
153. P. Rogers, *The Risk of Nuclear Terrorism in Britain*, Oxford Research Group, Oxford, (2006).
154. MIT, *The Future of Nuclear Power: An Interdisciplinary MIT Study*, <http://web.mit.edu/nuclearpow> (2003).

155. Z. Mian and A. Glaser, *Life in a Nuclear Powered Crowd*, INES Newsletter No. 52, 9-13, April, (2006).
156. E. Chivian, and others (eds.), *Last Aid: The Medical Dimensions of Nuclear War*, W.H. Freeman, San Fransisco, (1982).
157. P.B. Smith, J.D. Schilling and A.P. Haines, *Introduction and Summary*, in *Draft Report of the Pugwash Study Group: The World at the Crossroads*, Berlin, (1992).
158. World Resources Institute, *World Resources*, Oxford University Press, New York, (published annually).
159. J.R. Craig, D.J. Vaughan and B.J. Skinner, *Resources of the Earth: Origin, Use and Environmental Impact, Third Edition*, Prentice Hall, (2001).
160. W. Youngquist, *Geodesinies: The Inevitable Control of Earth Resources Over Nations and Individuals*, National Book Company, Portland Oregon, (1997).
161. M. Tanzer, *The Race for Resources. Continuing Struggles Over Minerals and Fuels*, Monthly Review Press, New York, (1980).
162. C.B. Reed, *Fuels, Minerals and Human Survival*, Ann Arbor Science Publishers Inc., Ann Arbor Michigan, (1975).
163. A.A. Bartlett, *Forgotten Fundamentals of the Energy Crisis*, American Journal of Physics, **46**, 876-888, (1978).
164. N. Gall, *We are Living Off Our Capital*, Forbes, September, (1986).

Chapter 8

LIVES IN THE PEACE MOVEMENT

8.1 Count Leo Tolstoy

Leo Tolstoy was born in 1828. While he was still a child, his parents died, and he became Count Tolstoy, with responsibility for the family estate at Yasnaya Polyana. As a young man, he was attracted to the gay and worldly social life of Moscow, but his diary during this period shows remorse over his pursuit of sensual pleasures. Disgusted with himself, he entered the army, and during idle periods he began his career as a writer. While still a soldier, he published a beautiful nostalgic work entitled “Childhood” as well as a number of skillful stories describing army life.

Schools and textbooks for peasants

At the age of 28, Tolstoy left the army and spent a brief period as a literary idol in St. Petersburg. He then became concerned about lack of education among Russian peasants, and he traveled widely in Europe, studying educational theory and methods. Returning to Yasnaya Polyana, he established schools for the peasants, published an educational magazine and compiled a number of textbooks whose simplicity and attractiveness anticipated modern teaching methods.

Tolstoy’s great novels

Tolstoy married in 1862 at the age of 34. His wife, Sonya Bers, shared his wide intellectual interests, and they had a happy family life with thirteen children¹. During this period, Tolstoy managed his estate with much success, and he produced his great literary masterpieces “War and Peace” and “Anna Karenina”. He modeled the characters in “War and Peace” after members of his own family. For example, Tolstoy’s famous heroine, Natasha, is modeled after his sister-in-law, Tanya Bers. Pierre in “War and Peace” and Levin in “Anna Karenina” reflect Tolstoy’s own efforts to understand the meaning of life, his concern with

the misery of the Russian peasants, and his ultimate conclusion that true happiness and peace of mind can only be found in a simple life devoted to the service of others.

Search for life's meaning

By the time Tolstoy had finished “Anna Karenina”, he had become very dissatisfied with the life that he was leading. Despite having achieved in great measure all of the goals for which humans usually strive, he felt that his existence lacked meaning; and in 1879 he even contemplated suicide. He looked for life's purpose by systematically studying the writings of scientists and philosophers, but he could not find an answer there that satisfied him.

Finally Tolstoy found inspiration in the humble and devout lives of the peasants. He decided that the teachings of Jesus, as recorded in the New Testament, could provide the answer for which he was searching. Tolstoy published an account of his spiritual crisis in a book entitled “A Confession”, in which he says:

“I searched for enlightenment everywhere in the hard-won accumulated knowledge of mankind. I searched passionately and long, not in a lazy way, but with my whole soul, day and night. I searched like a drowning man looking for safety - and found nothing. I searched all the sciences, and not only did I find nothing, but I also came to the conclusion that everyone who, like myself, had searched in the sciences for life's meaning had also found nothing.”

“I then diligently studied the teachings of Buddhism and Islam in the holy books of those religions; but most of all I studied Christianity as I met it in the holy Scriptures and in the living Christians around me...”

Love for the poor

“I began to approach the believers among the poor, simple ignorant people: pilgrims, monks and peasants... The whole life of Christians of our own circle seemed to be a contradiction of their faith. By contrast, the whole life of Christians of the peasant class was an affirmation of the view of life which their religious faith gave to them. I looked more and more deeply into the faith of these people, and the more deep my insight became, the more I became convinced that they had a genuine belief, that their faith was essential to them, and that it was their faith alone which gave their life a meaning and made it possible for them to live... I developed a love for these simple people.”

Moved by the misery of the urban poor whom he encountered in the slums of Moscow, Tolstoy wrote: “Between us, the rich and the poor, there is a wall of false education, and before we can help the poor, we must first tear down that wall. I was forced to the conclusion that our own wealth is the true cause of the misery of the poor.”

What Then Must We Do?

Tolstoy's book, “What Then Must We Do?”, tells of his experiences in the slums and analyses the causes of poverty. Tolstoy felt that the professed Christian belief of the

Czarist state was a thin cosmetic layer covering a structure that was fundamentally built on violence. Violence was used to maintain a huge gap between the rich and the poor, and violence was used in international relations. Tolstoy felt especially keenly the contradiction between Christianity and war. In a small book entitled “The Kingdom of God is Within Us” he wrote:

The contradiction between Christianity and war

“All other contradictions are insignificant compared with the contradiction which now faces humankind in international relations, and which cries out for a solution, since it brings the very existence of civilization into danger. This is the contradiction between the Christian conscience and war.”

“All of the Christian peoples of the world, who all follow one and the same spiritual life, so that any good and fruitful thought which is put forward in any corner of the world is immediately communicated to all of Christendom, where it arouses feelings of pride and happiness in us regardless of our nationality; we who simply love the thinkers, humanitarians, and poets of other countries; we who not only admire their achievements, but also feel delight in meeting them and greet them with friendly smiles; we will all be forced by the state to participate in a murderous war against these same people, a war which if it does not break out today will do so tomorrow.”

“...The sharpest of all contradictions can be seen between the government’s professed faith in the Christian law of the brotherhood of all humankind, and the military laws of the state, which force each young man to prepare himself for enmity and murder, so that each must be simultaneously a Christian and a gladiator.”

Banned and excommunicated

Tolstoy’s writings on Christianity and on social questions were banned by the public censor, and he was excommunicated from the Russian Orthodox Church. However, his universally recognized stature as one of the world’s greatest writers was undiminished, and his beliefs attracted many followers, both inside and outside of Russia.

Tolstoy and Gandhi

In 1894, the young Indian lawyer, Mohandas K. Gandhi, (who was then working for the civil rights of Indians in South Africa), read Tolstoy’s books on Christianity and was greatly influenced by them. Gandhi wrote a review of “The Kingdom of God is Within Us”, and in 1909 he sent Tolstoy an account of the activities of the civil rights movement in South Africa. He received a reply in which Tolstoy said:

“...The longer I live, and especially now, when I vividly feel the nearness of death, the more I want to tell others what I feel so particularly clearly and what to my mind is of great importance, namely that which is called passive resistance, but which is in reality nothing else but the teaching of love, uncorrupted by false interpretations. That love, i.e.

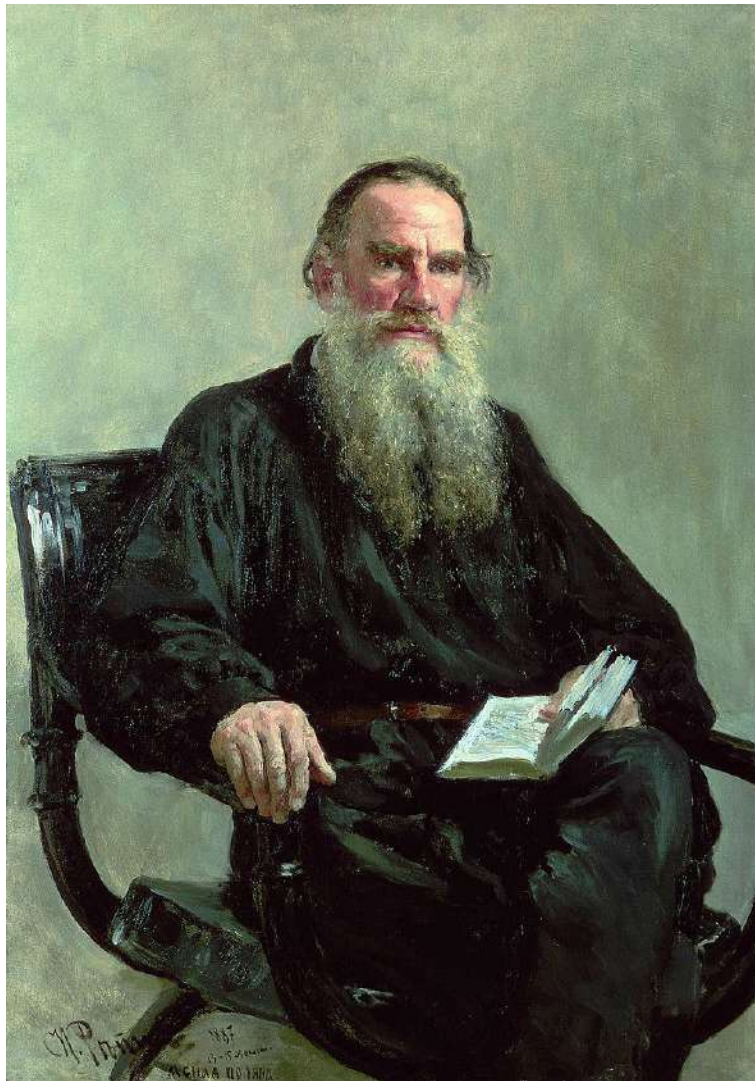


Figure 8.1: Portrait of Count Leo Tolstoy made in 1887 by Ilia Repin. Public domain, Wikimedia Commons

the striving for the union of human souls and the activity derived from that striving, is the highest and only law of human life, and in the depth of his soul every human being knows this (as we most clearly see in children); he knows this until he is entangled in the false teachings of the world. This law was proclaimed by all, by the Indian as by the Chinese, Hebrew, Greek and Roman sages of the world. I think that this law was most clearly expressed by Christ, who plainly said that in this alone is all the law and the prophets..."

"...The peoples of the Christian world have solemnly accepted this law, while at the same time they have permitted violence and built their lives on violence; and that is why the whole life of the Christian peoples is a continuous contradiction between what they profess, and the principles on which they order their lives - a contradiction between love accepted as the law of life, and violence which is recognized and praised, acknowledged even as a necessity in different phases of life, such as the power of rulers, courts, and armies..."

Nonviolent resistance to governmental violence

Tolstoy believed that violence can never under any circumstances be justified, and that therefore an individual's resistance to governmental violence must be passive and non-violent. He also believed that each individual ought to reduce his needs to a minimum in order to avoid exploiting the labor of others.

Tolstoy gave up meat, alcohol, tobacco, and hunting. He began to clean his own room, wore simple peasant clothes, worked in the fields, and made his own boots. He participated in famine relief, and he would have liked to give away all of his great wealth to feed the poor, but bowing to the protests of his family, he gave his wealth to them instead. Because he had been unable to convert his family to his beliefs, Tolstoy left home secretly on a November night in 1910, accompanied, like King Lear, by his youngest daughter. He died of pneumonia a few days later at a remote railway junction.

8.2 Mahatma Gandhi

If humans are ever to achieve a stable global society in the future, they will have to become much more modest in their economic behavior and much more peaceful in their politics. For both modesty and peace, Gandhi is a useful source of ideas. The problems with which he struggled during his lifetime are extremely relevant to us in the 21st Century, when both nuclear and ecological catastrophes threaten the world.

Avoiding escalation of conflicts

Today we read almost every day of killings that are part of escalating cycles of revenge and counter-revenge, for example in the Middle East. Gandhi's experiences both in South Africa and in India convinced him that such cycles could only be ended by unilateral acts

of kindness and understanding from one of the parties in a conflict. He said, “An eye for an eye makes the whole world blind”.

To the insidious argument that “the end justifies the means”, Gandhi answered firmly: “They say that ‘means are after all means’. I would say that ‘means are after all everything’. As the means, so the end. Indeed, the Creator has given us limited power over means, none over end... The means may be likened to a seed, and the end to a tree; and there is the same inviolable connection between the means and the end as there is between the seed and the tree. Means and end are convertible terms in my philosophy of life.”

Gandhi’s advocacy of non-violence is closely connected to his attitude towards ends and means. He believed that violent methods for achieving a desired social result would inevitably result in an escalation of violence. The end achieved would always be contaminated by the methods used. He was influenced by Leo Tolstoy with whom he exchanged many letters, and he in turn influenced Martin Luther King and Nelson Mandela.

The power of truth

Gandhi was trained as a lawyer, and when he began to practice in South Africa, in his first case, he was able to solve a conflict by proposing a compromise that satisfied both parties. Of this result he said, “My joy was boundless. I had learnt the true practice of law. I had learnt to find out the better side of human nature and to enter men’s hearts. I realized that the true function of a lawyer was to unite parties riven asunder.” When Gandhi became involved with the struggle for civil rights of the Indian minority in South Africa, his background as a lawyer once more helped him. This time his jury was public opinion in England. When Gandhi lead the struggle for reform, he insisted that the means of protest used by his followers should be non-violent, even though violence was frequently used against them. In this way they won their case in the court of public opinion. Gandhi called this method of protest “satyagraha”, a Sanskrit word meaning “the power of truth”. In today’s struggles for justice and peace, the moral force of truth and nonviolence can win victories in the court of world public opinion.

Harmony between religious groups

Gandhi believed that at their core, all religions are based on the concepts of truth, love, compassion, nonviolence and the Golden Rule. When asked whether he was a Hindu, Gandhi answered, “Yes I am. I am also a Christian, a Muslim, a Buddhist and a Jew.” When praying at his ashram, Gandhi made a point of including prayers from many religions. One of the most serious problems that he had to face in his efforts to free India from British rule was disunity and distrust, even hate, between the Hindu and Muslim communities. Each community felt that with the British gone, they might face violence and repression from the other. Gandhi made every effort to bridge the differences and to create unity and harmony. His struggles with this problem are highly relevant to us today, when the world is split by religious and ethnic differences.

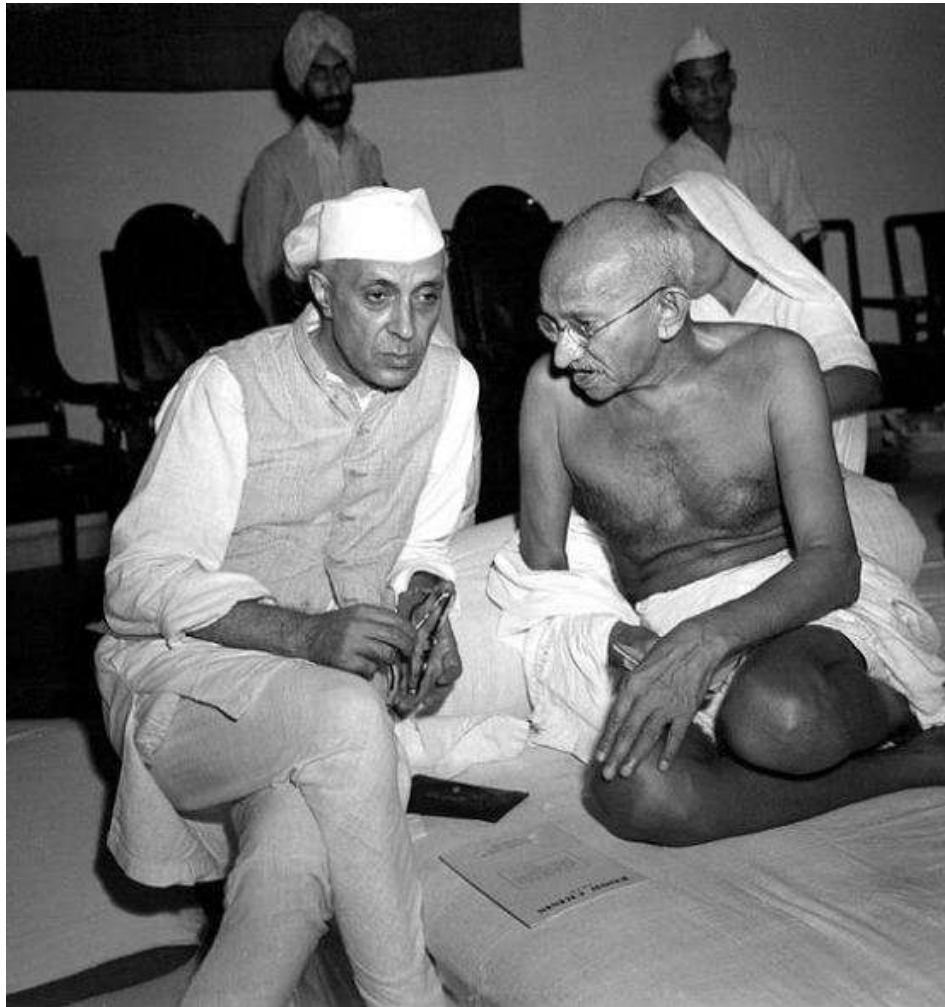


Figure 8.2: Gandhi and Nehru at a meeting of the Congress Party. After India gained its independence, it was Nehru's vision of an urbanized and industrialized India that prevailed. Gandhi's much more sustainable vision of "India of villages" was lost. (Wikimedia Commons)

Solidarity with the poor

Today's world is characterized by intolerable economic inequalities, both between nations and within nations. 8 million children die each year from poverty-related causes. 1.3 billion people live on less than 1.25 dollars a day. Gandhi's concern for the poor can serve as an example to us today, as we work to achieve a more equal world. He said, "There is enough for every man's need, but not for every man's greed."

Voluntary reduction of consumption

After Gandhi's death, someone took a photograph of all his worldly possessions. It was a tiny heap, consisting of his glasses, a pair of sandals, a homespun cloth (his only garment) and a watch. That was all. By reducing his own needs and possessions to an absolute minimum, Gandhi had tried to demonstrate that the commonly assumed connection between wealth and merit is false. This is relevant today, in a world where we face a crisis of diminishing resources. Not only fossil fuels, but also metals and arable land per capita will become scarce in the future. This will force a change in lifestyle, particularly in the industrialized countries, away from consumerism and towards simplicity. Gandhi's example can teach us that we must cease to use wealth and "conspicuous consumption" as a measure of merit.

Gandhian economics

In his autobiography, Mahatma Gandhi says: "Three moderns have left a deep impression on my life and captivated me: Raychandbhai (the Indian philosopher and poet) by his living contact; Tolstoy by his book 'The Kingdom of God is Within You'; and Ruskin by his book 'Unto This Last'." Ruskin's book, "Unto This Last", which Gandhi read in 1904, is a criticism of modern industrial society. Ruskin believed that friendships and warm interpersonal relationships are a form of wealth that economists have failed to consider. He felt that warm human contacts are most easily achieved in small agricultural communities, and that therefore the modern tendency towards centralization and industrialization may be a step backward in terms of human happiness. While still in South Africa, Gandhi founded two religious Utopian communities based on the ideas of Tolstoy and Ruskin, Phoenix Farm (1904) and Tolstoy Farm (1910).

Because of his growing fame as the leader of the Indian civil rights movement in South Africa, Gandhi was persuaded to return to India in 1914 and to take up the cause of Indian home rule. In order to reacquaint himself with conditions in India, he travelled tirelessly, now always going third class as a matter of principle.

During the next few years, Gandhi worked to reshape the Congress Party into an organization which represented not only India's Anglicized upper middle class but also the millions of uneducated villagers who were suffering under an almost intolerable burden of

poverty and disease. In order to identify himself with the poorest of India's people, Gandhi began to wear only a white loincloth made of rough homespun cotton. He traveled to the remotest villages, recruiting new members for the Congress Party, preaching non-violence and "firmness in the truth", and becoming known for his voluntary poverty and humility. The villagers who flocked to see him began to call him "Mahatma" (Great Soul).

Disturbed by the spectacle of unemployment and poverty in the villages, Gandhi urged the people of India to stop buying imported goods, especially cloth, and to make their own. He advocated the reintroduction of the spinning wheel into village life, and he often spent some hours spinning himself. The spinning wheel became a symbol of the Indian independence movement, and was later incorporated into the Indian flag.

The movement for boycotting British goods was called the "Swadeshi movement". The word Swadeshi derives from two Sanskrit roots: Swa, meaning self, and Desh, meaning country. Gandhi described Swadeshi as "a call to the consumer to be aware of the violence he is causing by supporting those industries that result in poverty, harm to the workers and to humans or other creatures."

Gandhi tried to reconstruct the crafts and self-reliance of village life that he felt had been destroyed by the colonial system. "I would say that if the village perishes, India will perish too", he wrote, "India will be no more India. Her own mission in the world will get lost. The revival of the village is only possible when it is no more exploited. Industrialization on a mass scale will necessarily lead to passive or active exploitation of the villagers as problems of competition and marketing come in. Therefore we have to concentrate on the village being self-contained, manufacturing mainly for use. Provided this character of the village industry is maintained, there would be no objection to villagers using even the modern machines that they can make and can afford to use. Only they should not be used as a means of exploitation by others."

"You cannot build nonviolence on a factory civilization, but it can be built on self-contained villages... Rural economy as I have conceived it, eschews exploitation altogether, and exploitation is the essence of violence... We have to make a choice between India of the villages that are as ancient as herself and India of the cities which are a creation of foreign domination..."

"Machinery has its place; it has come to stay. But it must not be allowed to displace necessary human labour. An improved plow is a good thing. But if by some chances, one man could plow up, by some mechanical invention of his, the whole of the land of India, and control all the agricultural produce, and if the millions had no other occupation, they would starve, and being idle, they would become dunces, as many have already become. There is hourly danger of many being reduced to that unenviable state."

In these passages we see Gandhi not merely as a pioneer of nonviolence; we see him also as an economist. Faced with misery and unemployment produced by machines, Gandhi tells us that social goals must take precedence over blind market mechanisms. If machines are causing unemployment, we can, if we wish, and use labor-intensive methods instead. With Gandhi, the free market is not sacred; we can do as we wish, and maximize human happiness, rather than maximizing production and profits.

Mahatma Gandhi was assassinated by a Hindu extremist on January 30, 1948. After

his death, someone collected and photographed all his worldly goods. These consisted of a pair of glasses, a pair of sandals, a pocket watch and a white homespun loincloth. Here, as in the Swadeshi movement, we see Gandhi as a pioneer of economics. He deliberately reduced his possessions to an absolute minimum in order to demonstrate that there is no connection between personal merit and material goods. Like Veblen, Mahatma Gandhi told us that we must stop using material goods as a means of social competition. We must start to judge people not by what they have, but by what they are.

8.3 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.”



Figure 8.3: Martin Luther King Jr. speaking in Washington. Source: American Civil Liberties Union of Virginia, acluva.org

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, ‘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.

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.

8.4 Wilfred Owen

Expressing the horror of war

Wilfred Owen and his mentor, Siegfried Sassoon were two poets who eloquently described the horrors of World War I. They met in a military hospital, after both had been wounded in the war. Owen had been writing poetry since the age of 11, but not about war. When he became friends with Sassoon during their hospital stay, Owen was inspired by Sassoon's example and realized that the horrors of trenches and gas warfare deserved to be described realistically in poetry. Against the strong advice of Sassoon, Owen insisted on returning to active duty in France, where he wrote the eloquent and bitter war poems for which he is remembered.

Owen was killed in action exactly one week before the end of the war. His mother received the telegram informing her of his death on Armistice Day, as the church bells were ringing out in celebration. Here are two of Owen's poems:

Dulce et decorum Est

*Bent double, like old beggars under sacks,
Knock-kneed, coughing like hags, we cursed through sludge,
Till on the haunting flares we turned our backs,
And towards our distant rest began to trudge.
Men marched asleep. Many had lost their boots,
But limped on, blood-shod. All went lame, all blind;
Drunk with fatigue; deaf even to the hoots
Of gas-shells dropping softly behind.*

*Gas! GAS! Quick, boys! - An ecstasy of fumbling
Fitting the clumsy helmets just in time,
But someone still was yelling out and stumbling
And flound'ring like a man in fire or lime.
Dim through the misty panes and thick green light,
As under a green sea, I saw him drowning.
In all my dreams before my helpless sight
He plunges at me, guttering, choking, drowning.*

If in some smothering dreams, you too could pace

*Behind the wagon that we flung him in,
 And watch the white eyes writhing in his face,
 His hanging face, like a devil's sick of sin,
 If you could hear, at every jolt, the blood
 Come gargling from the froth-corrupted lungs
 Obscene as cancer, bitter as the cud
 Of vile, incurable sores on innocent tongues,
 My friend, you would not tell with such high zest
 To children ardent for some desperate glory,
 The old Lie: Dulce et decorum est
 Pro patria mori.*

The parable of the old man and the young

*So Abram rose, and clave the wood, and went,
 And took the fire with him, and a knife.
 And as they sojourned both of them together,
 Isaac the first-born spake and said, My Father,
 Behold the preparations, fire and iron,
 But where the lamb for this burnt-offering?
 Then Abram bound the youth with belts and straps,
 and builded parapets and trenches there,
 And stretchèd forth the knife to slay his son.
 When lo! an angel called him out of heaven,
 Saying, Lay not thy hand upon the lad,
 Neither do anything to him. Behold,
 A ram, caught in a thicket by its horns;
 Offer the Ram of Pride instead of him.*

*But the old man would not so, but slew his son,
 And half the seed of Europe, one by one.*



Figure 8.4: Wilfred Owen.

8.5 Siegfried Sassoon

Siegfried Sassoon was born into a wealthy family, and prior to World War I, he led a privileged life. During the war, he served in France, and he received the Military Cross for bringing back a wounded soldier under heavy fire. After being wounded, he shared a hospital room with Wilfred Owen. Sassoon's bitter poems describing the horrors of war inspired Owen's own poems. Here are two by Sassoon:

Attack

*At dawn the ridge emerges massed and dun
In the wild purple of the glow'ring sun,
Smouldering through spouts of drifting smoke that shroud
The menacing scarred slope; and, one by one,
Tanks creep and topple forward to the wire.
The barrage roars and lifts. Then, clumsily bowed
With bombs and guns and shovels and battle-gear,
Men jostle and climb to, meet the bristling fire.
Lines of grey, muttering faces, masked with fear,
They leave their trenches, going over the top,
While time ticks blank and busy on their wrists,
And hope, with furtive eyes and grappling fists,
Flounders in mud. O Jesus, make it stop!*

The death bed

*He drowsed and was aware of silence heaped
Round him, unshaken as the steadfast walls;
Aqueous like floating rays of amber light,
Soaring and quivering in the wings of sleep.
Silence and safety; and his mortal shore
Lipped by the inward, moonless waves of death.*

*Someone was holding water to his mouth.
He swallowed, unresisting; moaned and dropped
Through crimson gloom to darkness; and forgot
The opiate throb and ache that was his wound.
Water - calm, sliding green above the weir;
Water - a sky-lit alley for his boat,
Bird-voiced, and bordered with reflected flowers
And shaken hues of summer: drifting down,
He dipped contented oars, and sighed, and slept.*

*Night, with a gust of wind, was in the ward,
Blowing the curtain to a gummering curve.
Night. He was blind; he could not see the stars
Glinting among the wraiths of wandering cloud;
Queer blots of colour, purple, scarlet, green,
Flickered and faded in his drowning eyes.*

*Rain - he could hear it rustling through the dark;
Fragrance and passionless music woven as one;
Warm rain on drooping roses; pattering showers
That soak the woods; not the harsh rain that sweeps
Behind the thunder, but a trickling peace,
Gently and slowly washing life away.*

*He stirred, shifting his body; then the pain
Leaped like a prowling beast, and gripped and tore
His groping dreams with grinding claws and fangs.
But someone was beside him; soon he lay
Shuddering because that evil thing had passed.
And death, who'd stepped toward him, paused and stared.*

*Light many lamps and gather round his bed.
Lend him your eyes, warm blood, and will to live.
Speak to him; rouse him; you may save him yet.
He's young; he hated war; how should he die
When cruel old campaigners win safe through?*

*But death replied: "I choose him." So he went,
And there was silence in the summer night;
Silence and safety; and the veils of sleep.
Then, far away, the thudding of the guns.*



Figure 8.5: **Siegfried Sassoon.**

8.6 Edna St. Vincent Millay

The beautiful red-haired American poet, Edna St. Vincent Millay (1892-1950), is known for her lyric poetry, but she also wrote some of the finest sonnets in the English language, combining classic form with modern imagery. Many of these sonnets are based on the emotions that she experienced in her love affairs. However, my own favorite is a serious sequence of eighteen sonnets, *Epitaph for the Race of Man*, published in 1934, just as the catastrophe of World War II was about to engulf our planet.

The basic premise of Millay's *Epitaph* is that we know from the evolutionary history of life on earth, that no species survives forever. She speculates on what will be the final cause of the extinction of the human race, and concludes that Man will die by his own hand, since none the innumerable disasters that nature has thrown at us over the millennia has persuaded humankind "to lay aside the lever and the spade, and be as dust among the dusts that blow". Here are the eighteen sonnets from the sequence:

Epitaph For The Race Of Man

*Before this cooling planet shall be cold,
Long, long before the music of the Lyre,
Like the faint roar of distant breakers rolled
On reefs unseen, when wind and flood conspire
To drive the ships inshore - long, long, I say,
Before this ominous humming hits the ear,
Earth will have come upon a stiller day,
Man and his engines be no longer here.
High on his naked rock the mountain sheep
Will stand alone against the final sky,
Drinking a wind of danger new and deep,
Staring on Vega with a piercing eye,
And gather up his slender hooves and leap
From crag to crag down Chaos, and so go by.*

*When Death was young and bleaching bones were few,
A moving hill against the risen day
The dinosaur at morning made his way,
And dropped his dung along the blazing dew;
Trees with no name that now are agate grew
Lushly beside him in the steamy clay;
He woke and hungered, rose and stalked his prey,
And slept contented, in a world he knew.
In punctual season, with the race in mind,
His consort held aside her heavy tail,
And took the seed; and heard the seed confined*



Figure 8.6: The American poet, Edna St. Vincent Millay.

*Roar in her womb; and made a nest to hold
A hatched-out conqueror . . . but to no avail:
The veined and fertile eggs are long since cold.*

*Cretaceous bird, your giant claw no lime
From bark of holly bruised or mistletoe
Could have arrested, could have held you so
Through fifty million years of jostling time;
Yet cradled with you in the catholic slime
Of the young ocean's tepid lapse and flow
Slumbered an agent, weak in embryo,
Should grip you straitly, in its sinewy prime.
What bright collision in the zodiac brews,
What mischief dimples at the planet's core
For shark, for python, for the dove that coos
Under the leaves? - what frosty fate's in store
For the warm blood of man, - man, out of ooze
But lately crawled, and climbing up the shore?*

*Oh Earth, unhappy planet, born to die,
Might I your scribe and your confessor be,
What wonders must you not relate to me
Of Man, who, when his destiny was high
Strode like the sun into the middle sky
And shone an hour, and who so bright as he,
And like the sun went down into the sea,
Leaving no spark to be remembered by.
But no; you have not learned in all these years
To tell the leopard and the newt apart;
Man, with his singular laughter, his droll tears,
His engines and his conscience and his art,
Made but a simple sound upon your ears:
The patient beating of an animal heart.*

*When man is gone and only gods remain
To stride the world, their mighty bodies hung
With golden shields, and golden curls outflung
Above their childish foreheads; when the plain
Round skull of Man is lifted and again
Abandoned by the ebbing wave, among
The sand and pebbles of the beach, - what tongue
Will tell the marvel of the human brain?
Heavy with music once this windy shell,*

*Heavy with knowledge of the clustered stars;
The one-time tenant of this draughty hall
Himself, in learned pamphlet, did foretell,
After some aeons of study jarred by wars,
This toothy gourd, this head emptied of all.*

*See where Capella with her golden kids
Grazes the slope between the east and north?
Thus when the builders of the pyramids
Flung down their tools at nightfall and poured forth
Homeward to supper and a poor man's bed,
Shortening the road with friendly jest and slur,
The risen She-Goat showing blue and red
Climbed the clear dusk, and three stars followed her.
Safe in their linen and their spices lie
The kings of Egypt; even as long ago
Under these constellations, with long eye
And scented limbs they slept, and feared no foe.
Their will was law; their will was not to die:
And so they had their way; or nearly so.*

*He heard the coughing tiger in the night
Push at his door; close by his quiet head
About the wattled cabin the soft tread
Of heavy feet he followed, and the slight
Sigh of the long banana leaves; in sight
At last and leaning westward overhead
The Centaur and the Cross now heralded
The sun, far off but marching, bringing light.
What time the Centaur and the Cross were spent
Night and the beast retired into the hill,
Whereat serene and undevoured he lay,
And dozed and stretched and listened and lay still,
Breathing into his body with content
The temperate dawn before the tropic day.*

*Observe how Miyanoshita cracked in two
And slid into the valley; he that stood
Grinning with terror in the bamboo wood
Saw the earth heave and thrust its bowels through
The hill, and his own kitchen slide from view,
Spilling the warm bowl of his humble food
Into the lap of horror; mark how lewd*

*This cluttered gulf, - 'twas here his paddy grew.
Dread and dismay have not encompassed him;
The calm sun sets; unhurried and aloof
Into the riven village falls the rain;
Days pass; the ashes cool; he builds again
His paper house upon oblivion's brim,
And plants the purple iris in its roof.*

*He woke in terror to a sky more bright
Than middle day; he heard the sick earth groan,
And ran to see the lazy-smoking cone
Of the fire-mountain, friendly to his sight
As his wife's hand, gone strange and full of fright;
Over his fleeing shoulder it was shown
Rolling its pitchy lake of scalding stone
Upon his house that had no feet for flight.
Where did he weep? Where did he sit him down
And sorrow, with his head between his knees?
Where said the Race of Man, "Here let me drown"?
"Here let me die of hunger"? . "let me freeze"?
By nightfall he has built another town:
This boiling pot, this clearing in the trees.*

*The broken dike, the levee washed away,
The good fields flooded and the cattle drowned,
Estranged and treacherous all the faithful ground,
And nothing left but floating disarray
Of tree and home uprooted, - was this the day
Man dropped upon his shadow without a sound
And died, having laboured well and having found
His burden heavier than a quilt of clay?
No, no. I saw him when the sun had set
In water, leaning on his single oar
Above his garden faintly glimmering yet ...
There bulked the plough, here washed the updrifted weeds ...
And scull across his roof and make for shore,
With twisted face and pocket full of seeds.*

*Sweeter was loss than silver coins to spend,
Sweeter was famine than the belly filled;
Better than blood in the vein was the blood spilled;
Better than corn and healthy flocks to tend
And a tight roof and acres without end*

*Was the barn burned and the mild creatures killed,
And the back aging fast, and all to build:
For then it was, his neighbor was his friend.
Then for a moment the averted eye
Was turned upon him with benignant beam,
Defiance faltered, and derision slept;
He saw in a not unhappy dream
The kindly heads against the horrid sky,
And scowled, and cleared his throat and spat, and wept.*

*Now forth to meadows as the farmer goes
With shining buckets to the milking-ground,
He meets the black ant hurrying from his mound
To milk the aphid pastured on the rose;
But no good-morrow, as you might suppose,
No nod of greeting, no perfunctory sound
Passes between them; no occasion's found
For gossip as to how the fodder grows.
In chilly autumn on the hardening road
They meet again, driving their flocks to stall,
Two herdsmen, each with winter for a goad;
They meet and pass, and never a word at all
Gives one to t'other. On the quaint abode
Of each, the evening and the first snow fall.*

*His heatless room the watcher of the stars
Nightly inhabits when the night is clear;
Propping his mattress on the turning sphere,
Saturn his rings or Jupiter his bars
He follows, or the fleeing moons of Mars,
Till from his ticking lens they disappear...
Whereat he sighs, and yawns, and on his ear
The busy chirp of Earth remotely jars.
Peace at the void's heart through the wordless night,
A lamb cropping the awful grasses, grazed;
Earthward the trouble lies, where strikes his light
At dawn industrious Man, and unamazed
Goes forth to plough, flinging a ribald stone
At all endeavor alien to his own.*

*Him not the golden fang of furious heaven,
Nor whirling Aeolus on his awful wheel,
Nor foggy specter ramming the swift keel,*

*Nor flood, nor earthquake, nor the red tongue even
Of fire, disaster's dog - him, him bereaven
Of all save the heart's knocking, and to feel
The air upon his face: not the great heel
Of headless Force into the dust was driven.
These sunken cities, tier on tier, bespeak
How ever from the ashes with proud beak
And shining feathers did the phoenix rise,
And sail, and send the vulture from the skies...
That in the end returned; for Man was weak
Before the unkindness in his brother's eyes.*

*Now sets his foot upon the eastern sill
Aldeberan, swiftly rising, mounting high,
And tracks the Pleiads down the crowded sky,
And drives his wedge into the western hill;
Now for the void sets forth, and further still,
The questioning mind of man... that by and by
From the void's rim returns with swooping eye,
Having seen himself into the maelstrom spill.
Blench not, O race of Adam, lest you find
In the sun's bubbling bowl anonymous death,
Or lost in whistling space without a mind
To monstrous Nothing yield your little breath:
You shall achieve destruction where you stand,
In intimate conflict, at your brother's hand.*

*Alas for Man, so stealthily betrayed,
Bearing the bad cell in him from the start,
Pumping and feeding on his healthy heart
That wild disorder never to be stayed
When once established, destined to invade
With angry hordes the true and proper part,
'Til Reason joggles in the headsman's cart,
And Mania spits from every balustrade.
Would he had searched his closet for his bane,
Where lurked the trusted ancient of his soul,
Obsequious Greed, and seen that visage plain;
Would he had whittled treason from his side
In his stout youth and bled his body whole,
Then had he died a king, or never died."*

Only the diamond and the diamond's dust

*Can render up the diamond unto Man;
 One and invulnerable as it began
 Had it endured, but for the treacherous thrust
 That laid its hard heart open, as it must,
 And ground it down and fitted it to span
 A turbaned brow or fret an ivory fan,
 Lopped of its stature, pared of its proper crust.
 So Man, by all the wheels of heaven unscored,
 Man, the stout ego, the exuberant mind
 No edge could cleave, no acid could consume,
 Being split along the vein by his own kind,
 Gives over, rolls upon the palm abhorred,
 Is set in brass on the swart thumb of Doom.*

*Here lies, and none to mourn him but the sea,
 That falls incessant on the empty shore,
 Most various Man, cut down to spring no more;
 Before his prime, even in his infancy
 Cut down, and all the clamour that was he,
 Silenced; and all the riveted pride he wore,
 A rusted iron column whose tall core
 The rains have tunneled like an aspen tree.
 Man, doughty Man, what power has brought you low,
 That heaven itself in arms could not persuade
 To lay aside the lever and the spade
 And be as dust among the dusts that blow?
 Whence, whence the broadside? Whose the heavy blade?...
 Strive not to speak, poor scattered mouth; I know.*

It seems to me that although Millay's words were extremely appropriate as a warning to humankind in 1934, they are even more heavy with meaning today. Millay speaks eloquently to us over the years:.

8.7 Bertrand Russell

Bertrand Arthur William Russell, 3rd Earl Russell, OM, FRS, (1872-1970), was born into a wealthy and influential English family, whose members had been active in politics since the time of the Tudors. Bertrand Russell's grandfather, Lord John Russell, the third son of the Duke of Bedford and 1st Earl Russell, had twice served as Prime Minister during Queen Victoria's reign.

Because of the early death of his parents (Viscount and Viscountess Amberly) Bertrand

Russell was brought up by his grandparents, Lord John Russell and Lady Russell, who lived at Pembroke Lodge near Richmond Park, about fifteen miles west of London. Bertrand Russell's grandfather soon died too, and his grandmother became the dominant influence on the boy's early life. Although she was a religious conservative, Russell's grandmother nevertheless believed in independence of thought, accepted Darwinism, and supporter Irish Home Rule. She also had the motto (taken from the Bible) "Thou shalt not follow a multitude to do evil."

Bertrand Russell and his elder brother Frank were educated at home by tutors, and they had rather lonely and unhappy childhoods in the emotionally repressed atmosphere of Pembroke Lodge. However, when Bertrand was eleven years old, Frank introduced him to the work of Euclid. Bertrand Russell later described this event in his autobiography as "one of the great events of my life, as dazzling as first love". It is interesting that Albert Einstein had similar feelings when he encountered the works of Euclid at almost the same age.

During these early years Russell also discovered the writings of the poet Shelley, and he later wrote: "I spent all my spare time reading him, and learning him by heart, knowing no one to whom I could speak of what I thought or felt, I used to reflect how wonderful it would have been to know Shelley, and to wonder whether I should meet any live human being with whom I should feel so much sympathy".

In 1890, when Bertrand Russell was 18, he started his studies in mathematics at Trinity College, Cambridge University. He graduated with distinction, but because of his agnostic religious beliefs, he encountered difficulties. Nevertheless he continued to teach at Cambridge University, his most notable student being the Austrian-British philosopher Ludwig Wittgenstein (1889-1951).

During the years 1910-1913, Russell collaborated with his former teacher. Alfred North Whitehead (1861-1947) to write a 3-volume treatise entitled *Principia Mathematica*, which dealt with the logical foundations of mathematics and languages. At the end of the huge effort which he had devoted to writing this enormous work, Russell underwent a sudden conversion, during which all the aims of his life changed completely. Observing the terrible isolation of Whitehead's wife while she suffered an attack of angina, he had a sudden insight into the isolation of each human being and the need for better communication to break this isolation. As a result of this moment of intuition, Bertrand Russell resolved to abandon mathematics, and instead devote his life to making human existence happier and better.

Russell's idealism, honesty and humor shine from the pages of the enormous number of books, articles and letters that he wrote during the remainder of his life. His wide-ranging and influential writing won him not only great fame, but also the 1950 Nobel Prize in Literature.

Bertrand Russell was the author of the Russell-Einstein Declaration of 1955, the founding document of Pugwash Conferences on Science and World Affairs, an organization which won the Nobel Peace Prize in 1995. Russell devoted much of the last part of his life to working for the complete abolition of nuclear weapons.

Here are a few things that Bertrand Russell said:

War does not determine who is right, but only who is left.

The world is full of magical things patiently waiting for our wits to become sharper.

Men are born ignorant, not stupid. They are made stupid by education.

To fear love is to fear life, and those who fear life are already three parts dead.

The only thing that will redeem mankind is cooperation.

The trouble with the world is that the stupid are cocksure, and the intelligent are full of doubt.

Love is something more than desire for sexual intercourse; it is the principle means of escape from the loneliness which afflicts men and women throughout the greater part of their lives.

The good life is one inspired by love and guided by knowledge.

Those who have never known the deep intimacy and the intense companionship of mutual love have missed the best thing that life has to give.

Science is what you know, philosophy is what you don't know.

I would never die for my beliefs, because I might be wrong.

Extreme hopes are born from extreme misery.

To conquer fear is the beginning of wisdom.

The fact that an opinion has been widely held is no evidence whatever that it is not utterly absurd.

I have made an odd discovery. Every time I talk with a savant, I am convinced that happiness is no longer possible. Yet when I talk with my gardener, I'm convinced of the opposite.

Patriotism is the willingness to kill and be killed for trivial reasons.

Three passions, simple but overwhelmingly strong, have governed my life: the

longing for love, the search for knowledge, and unbearable pity for the suffering of mankind.

There lies before us, if we choose, continual progress in happiness, knowledge, and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death.



Figure 8.7: Pembroke Lodge, near Richmond Park, Bertrand Russell's childhood home.



Figure 8.8: Russell at the age of four.



Figure 8.9: **Russell at Trinity College Cambridge in 1893.**



Figure 8.10: Russell with two of his children, John and Kate. His second son, Conrad (1937-2004, not shown here) became the 5th Earl Russell, and had a very distinguished career as a liberal parliamentarian and historian.

8.8 Albert Einstein

“The unleashed power of the atom has changed everything except our ways of thinking, and thus we drift towards unparalleled catastrophes.”

“I don’t know what will be used in the next world war, but the 4th will be fought with stones.”

Albert Einstein (1879-1955)

Besides being one of the greatest physicists of all time, Albert Einstein was a lifelong pacifist, and his thoughts on peace can speak eloquently to us today. We need his wisdom today, when the search for peace has become vital to our survival as a species.

Family background

Albert Einstein was born in Ulm, Germany, in 1879. He was the son of middle-class, irreligious Jewish parents, who sent him to a Catholic school. Einstein was slow in learning to speak, and at first his parents feared that he might be retarded; but by the time he was eight, his grandfather could say in a letter: “Dear Albert has been back in school for a week. I just love that boy, because you cannot imagine how good and intelligent he has become.”

Remembering his boyhood, Einstein himself later wrote: “When I was 12, a little book dealing with Euclidean plane geometry came into my hands at the beginning of the school year. Here were assertions, as for example the intersection of the altitudes of a triangle in one point, which, though by no means self-evident, could nevertheless be proved with such certainty that any doubt appeared to be out of the question. The lucidity and certainty made an indescribable impression on me.”

When Albert Einstein was in his teens, the factory owned by his father and uncle began to encounter hard times. The two Einstein families moved to Italy, leaving Albert alone and miserable in Munich, where he was supposed to finish his course at the gymnasium. Einstein’s classmates had given him the nickname “Beidermeier”, which means something like “Honest John”; and his tactlessness in criticizing authority soon got him into trouble. In Einstein’s words, what happened next was the following: “When I was in the seventh grade at the Lutpold Gymnasium, I was summoned by my home-room teacher, who expressed the wish that I leave the school. To my remark that I had done nothing wrong, he replied only, ‘Your mere presence spoils the respect of the class for me’.”

Einstein left gymnasium without graduating, and followed his parents to Italy, where he spent a joyous and carefree year. He also decided to change his citizenship. “The over-emphasized military mentality of the German State was alien to me, even as a boy”, Einstein wrote later. “When my father moved to Italy, he took steps, at my request, to have me released from German citizenship, because I wanted to be a Swiss citizen.”

Special and general relativity theory

The financial circumstances of the Einstein family were now precarious, and it was clear that Albert would have to think seriously about a practical career. In 1896, he entered the famous Zürich Polytechnic Institute with the intention of becoming a teacher of mathematics and physics. However, his undisciplined and nonconformist attitudes again got him into trouble. His mathematics professor, Hermann Minkowski (1864-1909), considered Einstein to be a “lazy dog”; and his physics professor, Heinrich Weber, who originally had gone out of his way to help Einstein, said to him in anger and exasperation: “You’re a clever fellow, but you have one fault: You won’t let anyone tell you a thing! You won’t let anyone tell you a thing!”

Einstein missed most of his classes, and read only the subjects which interested him. He was interested most of all in Maxwell’s theory of electro-magnetism, a subject which was too “modern” for Weber. There were two major examinations at the Zürich Polytechnic Institute, and Einstein would certainly have failed them had it not been for the help of his loyal friend, the mathematician Marcel Grossman.

Grossman was an excellent and conscientious student, who attended every class and took meticulous notes. With the help of these notes, Einstein managed to pass his examinations; but because he had alienated Weber and the other professors who could have helped him, he found himself completely unable to get a job. In a letter to Professor F. Ostwald on behalf of his son, Einstein’s father wrote: “My son is profoundly unhappy because of his present joblessness; and every day the idea becomes more firmly implanted in his mind that he is a failure, and will not be able to find the way back again.”

From this painful situation, Einstein was rescued (again!) by his friend Marcel Grossman, whose influential father obtained for Einstein a position at the Swiss Patent Office: Technical Expert (Third Class). Anchored at last in a safe, though humble, position, Einstein married one of his classmates. He learned to do his work at the Patent Office very efficiently; and he used the remainder of his time on his own calculations, hiding them guiltily in a drawer when footsteps approached.

In 1905, this Technical Expert (Third Class) astonished the world of science with five papers, written within a few weeks of each other, and published in the *Annalen der Physik*. Of these five papers, three were classics: One of these was the paper in which Einstein applied Planck’s quantum hypothesis to the photoelectric effect. The second paper discussed “Brownian motion”, the zig-zag motion of small particles suspended in a liquid and hit randomly by the molecules of the liquid. This paper supplied a direct proof of the validity of atomic ideas and of Boltzmann’s kinetic theory. The third paper was destined to establish Einstein’s reputation as one of the greatest physicists of all time. It was entitled “On the Electrodynamics of Moving Bodies”, and in this paper, Albert Einstein formulated his special theory of relativity. Essentially, this theory maintained that all of the fundamental laws of nature exhibit a symmetry with respect to rotations in a 4-dimensional space-time continuum.

Gradually, the importance of Einstein’s work began to be realized, and he was much sought after. He was first made Assistant Professor at the University of Zürich, then full

Professor in Prague, then Professor at the Zürich Polytechnic Institute; and finally, in 1913, Planck and Nernst persuaded Einstein to become Director of Scientific Research at the Kaiser Wilhelm Institute in Berlin. He was at this post when the First World War broke out

While many other German intellectuals produced manifestos justifying Germany's invasion of Belgium, Einstein dared to write and sign an anti-war manifesto. Einstein's manifesto appealed for cooperation and understanding among the scholars of Europe for the sake of the future; and it proposed the eventual establishment of a League of Europeans. During the war, Einstein remained in Berlin, doing whatever he could for the cause of peace, burying himself unhappily in his work, and trying to forget the agony of Europe, whose civilization was dying in a rain of shells, machine-gun bullets, and poison gas.

The work into which Einstein threw himself during this period was an extension of his theory of relativity. He already had modified Newton's equations of motion so that they exhibited the space-time symmetry required by his Principle of Special Relativity. However, Newton's law of gravitation, remained a problem.

Obviously it had to be modified, since it disagreed with his Special Theory of Relativity; but how should it be changed? What principles could Einstein use in his search for a more correct law of gravitation? Certainly whatever new law he found would have to give results very close to Newton's law, since Newton's theory could predict the motions of the planets with almost perfect accuracy. This was the deep problem with which he struggled.

In 1907, Einstein had found one of the principles which was to guide him, the Principle of Equivalence of inertial and gravitational mass. After turning Newton's theory over and over in his mind, Einstein realized that Newton had used mass in two distinct ways: His laws of motion stated that the force acting on a body is equal to the mass of the body multiplied by its acceleration; but according to Newton, the gravitational force on a body is also proportional to its mass. In Newton's theory, gravitational mass, by a coincidence, is equal to inertial mass; and this holds for all bodies. Einstein decided to construct a theory in which gravitational and inertial mass necessarily have to be the same.

He then imagined an experimenter inside a box, unable to see anything outside it. If the box is on the surface of the earth, the person inside it will feel the pull of the earth's gravitational field. If the experimenter drops an object, it will fall to the floor with an acceleration of 32 feet per second per second. Now suppose that the box is taken out into empty space, far away from strong gravitational fields, and accelerated by exactly 32 feet per second per second. Will the enclosed experimenter be able to tell the difference between these two situations? Certainly no difference can be detected by dropping an object, since in the accelerated box, the object will fall to the floor in exactly the same way as before.

With this "thought experiment" in mind, Einstein formulated a general Principle of Equivalence: He asserted that no experiment whatever can tell an observer enclosed in a small box whether the box is being accelerated, or whether it is in a gravitational field. According to this principle, gravitation and acceleration are locally equivalent, or, to say the same thing in different words, gravitational mass and inertial mass are equivalent.

Einstein soon realized that his Principle of Equivalence implied that a ray of light must be bent by a gravitational field. This conclusion followed because, to an observer in an

accelerated frame, a light beam which would appear straight to a stationary observer, must necessarily appear very slightly curved. If the Principle of Equivalence held, then the same slight bending of the light ray would be observed by an experimenter in a stationary frame in a gravitational field.

Another consequence of the Principle of Equivalence was that a light wave propagating upwards in a gravitational field should be very slightly shifted to the red. This followed because in an accelerated frame, the wave crests would be slightly farther apart than they normally would be, and the same must then be true for a stationary frame in a gravitational field. It seemed to Einstein that it ought to be possible to test experimentally both the gravitational bending of a light ray and the gravitational red shift.

This seemed promising; but how was Einstein to proceed from the Principle of Equivalence to a formulation of the law of gravitation? Perhaps the theory ought to be modeled after Maxwell's electromagnetic theory, which was a field theory, rather than an "action at a distance" theory. Part of the trouble with Newton's law of gravitation was that it allowed a signal to be propagated instantaneously, contrary to the Principle of Special Relativity. A field theory of gravitation might cure this defect, but how was Einstein to find such a theory? There seemed to be no way.

From these troubles Albert Einstein was rescued (a third time!) by his staunch friend Marcel Grossman. By this time, Grossman had become a professor of mathematics in Zürich, after having written a doctoral dissertation on tensor analysis and non-Euclidean geometry, the very things that Einstein needed. The year was then 1912, and Einstein had just returned to Zürich as Professor of Physics at the Polytechnic Institute. For two years, Einstein and Grossman worked together; and by the time Einstein left for Berlin in 1914, the way was clear. With Grossman's help, Einstein saw that the gravitational field could be expressed as a curvature of the 4-dimensional space-time continuum.

In 1919, a British expedition, headed by Sir Arthur Eddington, sailed to a small island off the coast of West Africa. Their purpose was to test Einstein's prediction of the bending of light in a gravitational field by observing stars close to the sun during a total eclipse. The observed bending agreed exactly with Einstein's predictions; and as a result he became world-famous. The general public was fascinated by relativity, in spite of the abstruseness of the theory (or perhaps because of it). Einstein, the absent-minded professor, with long, uncombed hair, became a symbol of science. The world was tired of war, and wanted something else to think about.

Einstein met President Harding, Winston Churchill and Charlie Chaplin; and he was invited to lunch by the Archbishop of Canterbury. Although adulated elsewhere, he was soon attacked in Germany. Many Germans, looking for an excuse for the defeat of their nation, blamed it on the pacifists and Jews; and Einstein was both these things.

Einstein's letter to Freud: Why war?

Because of his fame, Einstein was asked to make several speeches at the Reichstag. and in all these speeches he condemned violence and nationalism, urging that these be replaced by and international cooperation and law under an effective international authority. He also

wrote many letters and articles pleading for peace and for the renunciation of militarism and violence.

Einstein believed that the production of armaments is damaging, not only economically, but also spiritually. In 1930 he signed a manifesto for world disarmament sponsored by the Womens International League for Peace and Freedom. In December of the same year, he made his famous statement in New York that if two percent of those called for military service were to refuse to fight, governments would become powerless, since they could not imprison that many people. He also argued strongly against compulsory military service and urged that conscientious objectors should be protected by the international community. He argued that peace, freedom of individuals, and security of societies could only be achieved through disarmament, the alternative being “slavery of the individual and annihilation of civilization”.

In letters, and articles, Einstein wrote that the welfare of humanity as a whole must take precedence over the goals of individual nations, and that we cannot wait until leaders give up their preparations for war. Civil society, and especially public figures, must take the lead. He asked how decent and self-respecting people can wage war, knowing how many innocent people will be killed.

In 1931, the International Institute for Intellectual Cooperation invited Albert Einstein to enter correspondence with a prominent person of his own choosing on a subject of importance to society. The Institute planned to publish a collection of such dialogues. Einstein accepted at once, and decided to write to Sigmund Freud to ask his opinion about how humanity could free itself from the curse of war. A translation from German of part of the long letter that he wrote to Freud is as follows:

“Dear Professor Freud, The proposal of the League of Nations and its International Institute of Intellectual Cooperation at Paris that I should invite a person to be chosen by myself to a frank exchange of views on any problem that I might select affords me a very welcome opportunity of conferring with you upon a question which, as things are now, seems the most important and insistent of all problems civilization has to face. This is the problem: Is there any way of delivering mankind from the menace of war? It is common knowledge that, with the advance of modern science, this issue has come to mean a matter of life or death to civilization as we know it; nevertheless, for all the zeal displayed, every attempt at its solution has ended in a lamentable breakdown.”

“I believe, moreover, that those whose duty it is to tackle the problem professionally and practically are growing only too aware of their impotence to deal with it, and have now a very lively desire to learn the views of men who, absorbed in the pursuit of science, can see world-problems in the perspective distance lends. As for me, the normal objective of my thoughts affords no insight into the dark places of human will and feeling. Thus in the enquiry now proposed, I can do little more than seek to clarify the question at issue and, clearing the ground of the more obvious solutions, enable you to bring the light of your far-reaching knowledge of man’s instinctive life upon the problem..”

“As one immune from nationalist bias, I personally see a simple way of dealing with the superficial (i.e. administrative) aspect of the problem: the setting up, by international consent, of a legislative and judicial body to settle every conflict arising between nations...

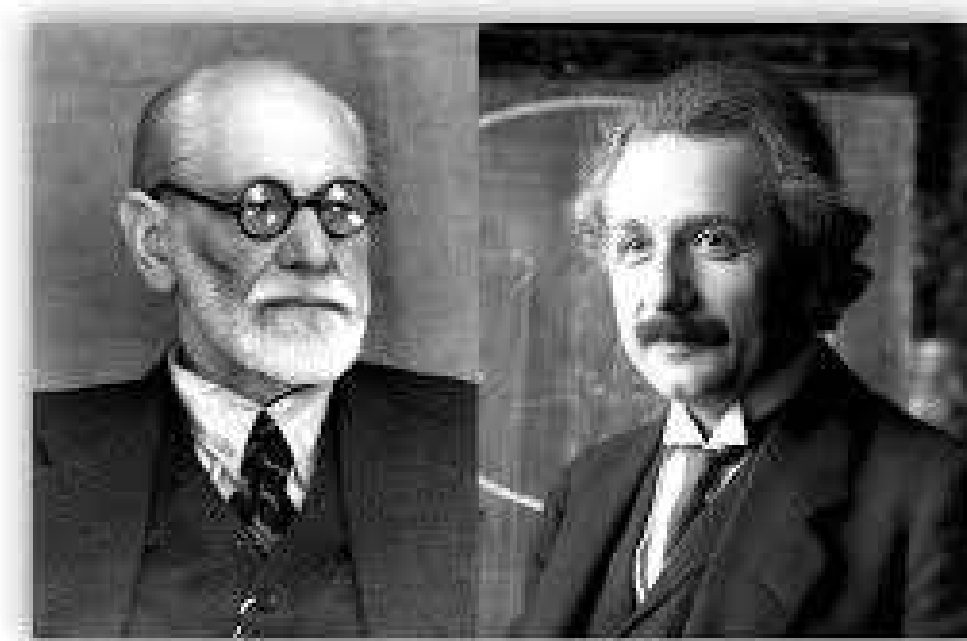


Figure 8.11: *Sigmund Freud and Albert Einstein (public domain). Their exchange of letters entitled “Why War?” deserves to be read by everyone concerned with the human future.*

But here, at the outset, I come up against a difficulty; a tribunal is a human institution which, in proportion as the power at its disposal is... prone to suffer these to be deflected by extrajudicial pressure..."

Freud replied with a long and thoughtful letter in which he said that a tendency towards conflict is an intrinsic part of human emotional nature, but that emotions can be overridden by rationality, and that rational behavior is the only hope for humankind.

The fateful letter to Roosevelt

Albert Einstein's famous relativistic formula, relating energy to mass, soon yielded an understanding of the enormous amounts of energy released in radioactive decay. Marie and Pierre Curie had noticed that radium maintains itself at a temperature higher than its surroundings. Their measurements and calculations showed that a gram of radium produces roughly 100 gram-calories of heat per hour. This did not seem like much energy until Rutherford found that radium has a half-life of about 1,000 years. In other words, after a thousand years, a gram of radium will still be producing heat, its radioactivity only reduced to one-half its original value. During a thousand years, a gram of radium produces about a million kilocalories, an enormous amount of energy in relation to the tiny size of its source! Where did this huge amount of energy come from? Conservation of energy was one of the most basic principles of physics. Would it have to be abandoned?

The source of the almost-unbelievable amounts of energy released in radioactive decay could be understood through Einstein's formula equating the energy of a system to its mass multiplied by the square of the velocity of light, and through accurate measurements of atomic weights. Einstein's formula asserted that mass and energy are equivalent. It was realized that in radioactive decay, neither mass nor energy is conserved, but only a quantity more general than both, of which mass and energy are particular forms. Scientists in several parts of the world realized that Einstein's discovery of the relationship between mass and energy, together with the discovery of fission of the heavy element uranium meant that it might be possible to construct a uranium-fission bomb of immense power.

Meanwhile night was falling on Europe. In 1929, an economic depression had begun in the United States and had spread to Europe. Without the influx of American capital, the postwar reconstruction of the German economy collapsed. The German middle class, which had been dealt a severe blow by the great inflation of 1923, now received a second heavy blow. The desperate economic chaos drove German voters into the hands of political extremists.

On January 30, 1933, Adolf Hitler was appointed Chancellor and leader of a coalition cabinet by President Hindenburg. Although Hitler was appointed legally to this post, he quickly consolidated his power by unconstitutional means: On May 2, Hitler's police seized the headquarters of all trade unions, and arrested labor leaders. The Communist and Socialist parties were also banned, their assets seized and their leaders arrested. Other political parties were also smashed. Acts were passed eliminating Jews from public service; and innocent Jewish citizens were boycotted, beaten and arrested. On March 11, 1938, Nazi troops entered Austria.

On March 16, 1939, the Italian physicist Enrico Fermi (who by then was a refugee in America) went to Washington to inform the Office of Naval Operations that it might be possible to construct an atomic bomb; and on the same day, German troops poured into Czechoslovakia.

A few days later, a meeting of six German atomic physicists was held in Berlin to discuss the applications of uranium fission. Otto Hahn, the discoverer of fission, was not present, since it was known that he was opposed to the Nazi regime. He was even said to have exclaimed: "I only hope that you physicists will never construct a uranium bomb! If Hitler ever gets a weapon like that, I'll commit suicide."

The meeting of German atomic physicists was supposed to be secret; but one of the participants reported what had been said to Dr. S. Flügge, who wrote an article about uranium fission and about the possibility of a chain reaction. Flügge's article appeared in the July issue of *Naturwissenschaften*, and a popular version in the *Deutsche Allgemeine Zeitung*. These articles greatly increased the alarm of American atomic scientists, who reasoned that if the Nazis permitted so much to be printed, they must be far advanced on the road to building an atomic bomb.

In the summer of 1939, while Hitler was preparing to invade Poland, alarming news reached the physicists in the United States: A second meeting of German atomic scientists had been held in Berlin, this time under the auspices of the Research Division of the German Army Weapons Department. Furthermore, Germany had stopped the sale of uranium from mines in Czechoslovakia.

The world's most abundant supply of uranium, however, was not in Czechoslovakia, but in Belgian Congo. Leo Szilard, a refugee Hungarian physicist who had worked with Fermi to measure the number of neutrons produced in uranium fission, was deeply worried that the Nazis were about to construct atomic bombs; and it occurred to him that uranium from Belgian Congo should not be allowed to fall into their hands.

Szilard knew that his former teacher, Albert Einstein, was a personal friend of Elizabeth, the Belgian Queen Mother. Einstein had met Queen Elizabeth and King Albert of Belgium at the Solvay Conferences, and mutual love of music had cemented a friendship between them. When Hitler came to power in 1933, Einstein had moved to the Institute of Advanced Studies at Princeton; and Szilard decided to visit him there. Szilard reasoned that because of Einstein's great prestige, and because of his long-standing friendship with the Belgian Royal Family, he would be the proper person to warn the Belgians not to let their uranium fall into the hands of the Nazis. Einstein agreed to write to the Belgian king and queen.

On August 2, 1939, Szilard again visited Einstein, accompanied by Edward Teller and Eugene Wigner, who (like Szilard) were refugee Hungarian physicists. By this time, Szilard's plans had grown more ambitious; and he carried with him the draft of another letter, this time to the American President, Franklin D. Roosevelt. Einstein made a few corrections, and then signed the fateful letter, which reads (in part) as follows:

"Some recent work of E. Fermi and L. Szilard, which has been communicated to me in manuscript, leads me to expect that the element uranium may be turned into an important source of energy in the immediate future. Certain aspects of the situation seem to call for watchfulness and, if necessary, quick action on the part of the Administration. I believe,

therefore, that it is my duty to bring to your attention the following..”

“It is conceivable that extremely powerful bombs of a new type may be constructed. A single bomb of this type, carried by boat and exploded a port, might very well destroy the whole port, together with some of the surrounding territory..”

The letter also called Roosevelt’s attention to the fact that Germany had already stopped the export of uranium from the Czech mines under German control. After making a few corrections, Einstein signed it. On October 11, 1939, three weeks after the defeat of Poland, Roosevelt’s economic adviser, Alexander Sachs, personally delivered the letter to the President. After discussing it with Sachs, the President commented, “This calls for action.” Later, when atomic bombs were dropped on civilian populations in an already virtually-defeated Japan, Einstein bitterly regretted having signed Szilard’s letter to Roosevelt. He said repeatedly that signing the letter was the greatest mistake of his life, and his remorse was extreme.

Throughout the remainder of his life, in addition to his scientific work, Einstein worked tirelessly for peace, international understanding and nuclear disarmament. His last public act, only a few days before his death in 1955, was to sign the Russell-Einstein Manifesto, warning humankind of the catastrophic consequences that would follow from a war with nuclear weapons.

A few more things that Einstein said about peace:

We cannot solve our problems with the same thinking that we used when we created them.

It has become appallingly obvious that our technology has exceeded our humanity.

Peace cannot be kept by force; it can only be achieved by understanding.

The world is a dangerous place to live; not because of the people who are evil, but because of the people who don’t do anything about it.

Insanity: doing the same thing over and over again and expecting to get different results.

Nothing will end war unless the people themselves refuse to go to war.

Past thinking and methods did not prevent world wars. Future thinking must prevent war.

You cannot simultaneously prevent and prepare for war.

Never do anything against conscience, even if the state demands it.

Taken as a whole, I would believe that Gandhi's views were the most enlightened of all political men of our time.

Without ethical culture, there is no salvation for humanity.

War seems to me to be a mean, contemptible thing: I would rather be hacked in pieces than take part in such an abominable business. And yet so high, in spite of everything, is my opinion of the human race that I believe this bogey would have disappeared long ago, had the sound sense of the nations not been systematically corrupted by commercial and political interests acting through the schools and the Press.

8.9 Joseph Rotblat

Pugwash Conferences on Science and World Affairs

In March, 1954, the US tested a hydrogen bomb at the Bikini Atoll in the Pacific Ocean. It was 1000 times more powerful than the Hiroshima bomb. The Japanese fishing boat, Lucky Dragon, was 130 kilometers from the Bikini explosion, but radioactive fallout from the test killed one crew member and made all the others seriously ill.

In England, Prof. Joseph Rotblat, a Polish scientist who had resigned from the Manhattan Project for moral reasons when it became clear that Germany would not develop nuclear weapons, was asked to appear on a BBC program to discuss the Bikini test. He was asked to discuss the technical aspects of H-bombs, while the Archbishop of Canterbury and the philosopher Lord Bertrand Russell were asked to discuss the moral aspects.

Rotblat had become convinced that the Bikini bomb must have involved a third stage, where fast neutrons from the hydrogen thermonuclear reaction produced fission in a casing of ordinary uranium. Such a bomb would produce enormous amounts of highly dangerous radioactive fallout, and Rotblat became extremely worried about the possibly fatal effect on all living things if large numbers of such bombs were ever used in a war. He confided his worries to Bertrand Russell, whom he had met on the BBC program.

After discussing the Bikini test and its radioactive fallout with Joseph Rotblat, Lord Russell became concerned for the future of the human gene pool if large numbers of such bombs should ever be used in a war. After consultations with Albert Einstein and others, he drafted a document warning of the grave dangers presented by fission-fusion-fission bombs. On July 9, 1955, with Rotblat in the chair, Russell read the Manifesto to a packed press conference.

The document contains the words: "Here then is the problem that we present to you, stark and dreadful and inescapable: Shall we put an end to the human race, or shall



Figure 8.12: Joseph Rotblat believed that the Bikini bomb was of a fission-fusion-fission type. Besides producing large amounts of fallout, such a bomb can be made enormously powerful at very little expense.

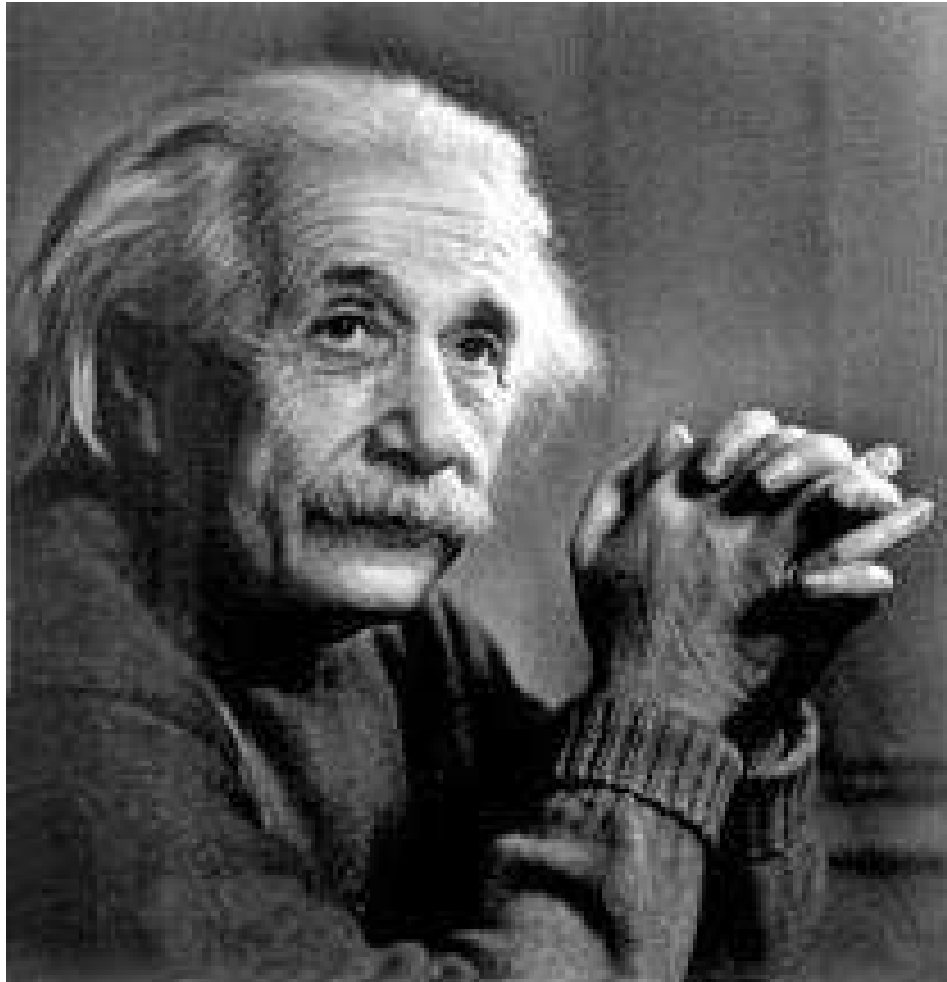


Figure 8.13: **Signing the Russell-Einstein declaration was the last public act of Einstein's life.**



Figure 8.14: Lord Russell devoted much of the remainder of his life to working for the abolition of nuclear weapons. Here he is seen in 1962 in Trafalgar Square, London, addressing a meeting of the Campaign for Nuclear Disarmament.

mankind renounce war?... There lies before us, if we choose, continual progress in happiness, knowledge and wisdom. Shall we, instead, choose death because we cannot forget our quarrels? We appeal as human beings to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death."

In 1945, with the horrors of World War II fresh in everyone's minds, the United Nations had been established with the purpose of eliminating war. A decade later, the Russell-Einstein Manifesto reminded the world that war *must* be abolished as an institution because of the constantly increasing and potentially catastrophic power of modern weapons.

The Russell-Einstein Manifesto called for a meeting of scientists from both sides of the Cold War to try to minimize the danger of a thermonuclear conflict. The first meeting took place at the summer home of the Canadian philanthropist Cyrus Eaton at the small village of Pugwash, Nova Scotia.

From this small beginning, a series of conferences developed, in which scientists, especially physicists, attempted to work for peace, and tried to address urgent problems related to science. These conferences were called Pugwash Conferences on Science and World Affairs, taking their name from the small village in Nova Scotia where the first meeting was held. From the start, the main aim of the meetings was to reduce the danger that civilization would be destroyed in a thermonuclear war.

It can be seen from what has been said that the Pugwash Conferences began during one of the tensest periods of the Cold War, when communication between the Communist and Anti-communist blocks was difficult. During this period, the meetings served the important purpose of providing a forum for informal diplomacy. The participants met, not as representatives of their countries, but as individuals, and the discussions were confidential.

This method of operation proved to be effective, and the initial negotiations for a number of important arms control treaties were aided by Pugwash Conferences. These include the START treaties, the treaties prohibiting chemical and biological weapons, the Nuclear Nonproliferation Treaty (NPT), and the Comprehensive Test Ban Treaty (CTBT).

Former Soviet President Gorbachev has said that discussions with Pugwash scientists helped him to conclude that the policy of nuclear confrontation was too dangerous to be continued.

Over the years, the number of participants attending the annual Pugwash Conference has grown, and the scope of the problems treated has broadened. Besides scientists, the participants now include diplomats, politicians, economists, social scientists and military experts. Normally the number attending the yearly conference is about 150.

Besides plenary sessions, the conferences have smaller working groups dealing with specific problems. There is always a working group aimed at reducing nuclear dangers, and also groups on controlling or eliminating chemical and biological weapons. In addition, there may now be groups on subjects such as climate change, poverty, United Nations reform, and so on.

Invitations to the conferences are issued by the Secretary General to participants nominated by the national groups. The host nation usually pays for the local expenses, but



Figure 8.15: This photo shows Sir Joseph Rotblat in his London office shortly after he had been informed about the award of the Nobel Peace Prize. The bundles of manuscripts in the background are there because he edited the proceedings of each large yearly Pugwash Conference. The resulting books were then distributed to governments and to decision-makers.

participants finance their own travel.

In addition to the large annual meeting, the Pugwash organization also arranges about ten specialized workshops per year, with 30-40 participants each.

Although attendance at the conferences and workshops is by invitation, everyone is very welcome to join one of the national Pugwash groups. The international organization's website is at www.pugwash.org.

In 1995, the Nobel Peace Prize was awarded jointly to Prof. Joseph Rotblat and to Pugwash Conferences on Science and World Affairs as an organization, "...for their efforts to diminish the part played by nuclear arms in international politics and in the longer run to eliminate such arms." The award was made 50 years after the tragic destruction of Hiroshima and Nagasaki.

In his acceptance speech, Sir Joseph Rotblat (as he soon became) emphasized the same

point that has been made by the Russell-Einstein Manifesto - that war itself must be eliminated in order to free civilization from the danger of nuclear destruction. The reason for this is that knowledge of how to make nuclear weapons can never be forgotten. Even if they were eliminated, these weapons could be rebuilt during a major war. Thus the final abolition of nuclear weapons is linked to a change of heart in world politics and to the abolition of nuclear war.

"The quest for a war-free world", Sir Joseph concluded, "has a basic purpose: survival. But if, in the process, we can learn to achieve it by love rather than by fear, by kindness rather than compulsion; if in the process we can learn to combine the essential with the enjoyable, the expedient with the benevolent, the practical with the beautiful, this will be an extra incentive to embark on this great task. Above all, remember your humanity"

Text of the Russell-Einstein Manifesto

Issued in London, 9 July, 1955

In the tragic situation which confronts humanity, we feel that scientists should assemble in conference to appraise the perils that have arisen as a result of the development of weapons of mass destruction, and to discuss a resolution in the spirit of the appended draft.

We are speaking on this occasion, not as members of this or that nation, continent, or creed, but as human beings, members of the species Man, whose continued existence is in doubt. The world is full of conflicts; and, overshadowing all minor conflicts, the titanic struggle between Communism and anti-Communism.

Almost everybody who is politically conscious has strong feelings about one or more of these issues; but we want you, if you can, to set aside such feelings and consider yourselves only as members of a biological species which has had a remarkable history, and whose disappearance none of us can desire.

We shall try to say no single word which should appeal to one group rather than to another. All, equally, are in peril, and, if the peril is understood, there is hope that they may collectively avert it.

We have to learn to think in a new way. We have to learn to ask ourselves, not what steps can be taken to give military victory to whatever group we prefer, for there no longer are such steps; the question we have to ask ourselves is: what steps can be taken to prevent a military contest of which the issue must be disastrous to all parties?

The general public, and even many men in positions of authority, have not realized what would be involved in a war with nuclear bombs. The general public still thinks in terms of the obliteration of cities. It is understood that the new bombs are more powerful than the old, and that, while one A-bomb could obliterate Hiroshima, one H-bomb could obliterate the largest cities, such as London, New York, and Moscow.

No doubt in an H-bomb war great cities would be obliterated. But this is one of the minor disasters that would have to be faced. If everybody in London, New York, and Moscow were exterminated, the world might, in the course of a few centuries, recover from the blow. But we now know, especially since the Bikini test, that nuclear bombs can gradually spread destruction over a very much wider area than had been supposed.

It is stated on very good authority that a bomb can now be manufactured which will be 2,500 times as powerful as that which destroyed Hiroshima. Such a bomb, if exploded near the ground or under water, sends radioactive particles into the upper air. They sink gradually and reach the surface of the earth in the form of a deadly dust or rain. It was this dust which infected the Japanese fishermen and their catch of fish.

No one knows how widely such lethal radioactive particles might be diffused, but the best authorities are unanimous in saying that a war with H-bombs might possibly put an end to the human race. It is feared that if many H-bombs are used there will be universal death, sudden only for a minority, but for the majority a slow torture of disease and disintegration.

Many warnings have been uttered by eminent men of science and by authorities in military strategy. None of them will say that the worst results are certain. What they do say is that these results are possible, and no one can be sure that they will not be realized. We have not yet found that the views of experts on this question depend in any degree upon their politics or prejudices. They depend only, so far as our researches have revealed, upon the extent of the particular expert's knowledge. We have found that the men who know most are the most gloomy.

Here, then, is the problem which we present to you, stark and dreadful and inescapable: Shall we put an end to the human race; or shall mankind renounce war? People will not face this alternative because it is so difficult to abolish war.

The abolition of war will demand distasteful limitations of national sovereignty. But what perhaps impedes understanding of the situation more than anything else is that the term "mankind" feels vague and abstract. People scarcely realize in imagination that the danger is to themselves and their children and their grandchildren, and not only to a dimly apprehended humanity. They can scarcely bring themselves to grasp that they, individually, and those whom they love are in imminent danger of perishing agonizingly. And so they hope that perhaps war may be allowed to continue provided modern weapons are prohibited.

This hope is illusory. Whatever agreements not to use H-bombs had been reached in time of peace, they would no longer be considered binding in time of war, and both sides would set to work to manufacture H-bombs as soon as war broke out, for, if one side manufactured the bombs and the other did not, the side that manufactured them would inevitably be victorious.

Although an agreement to renounce nuclear weapons as part of a general reduction of armaments would not afford an ultimate solution, it would serve certain important purposes. First: any agreement between East and West is to the good in so far as it tends to diminish tension. Second: the abolition of thermonuclear weapons, if each side believed that the other had carried it out sincerely, would lessen the fear of a sudden attack in the style of Pearl Harbor, which at present keeps both sides in a state of nervous apprehension. We should, therefore, welcome such an agreement though only as a first step. Most of us are not neutral in feeling, but, as human beings, we have to remember that, if the issues between East and West are to be decided in any manner that can give any possible satisfaction to anybody, whether Communist or anti-Communist, whether Asian or European or American, whether White or Black, then these issues must not be decided by war. We should wish this to be understood, both in the East and in the West. There lies before us, if we choose, continual progress in happiness, knowledge, and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death.

Resolution

We invite this Congress, and through it the scientists of the world and the general public, to subscribe to the following resolution: “In view of the fact that in any future world war nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge the Governments of the world to realize, and to acknowledge publicly, that their purpose cannot be furthered by a world war, and we urge them, consequently, to find peaceful means for the settlement of all matters of dispute between them.”

The document was signed by Max Born, Perry W. Bridgman, Albert Einstein, Leopold Infeld, Frederic Joliot-Curie, Herman J. Muller, Linus Pauling, Cecil F. Powell, Joseph Rotblat, Bertrand Russell, and Hideki Yukawa

8.10 Daisaku Ikeda and SGI

Soka Gakkai is a large Nichiren Buddhist religious group. Its 12 million members are centered primarily in Japan, but Soka Gakkai International (SGI) has groups in 192 countries. In Japanese, the words “Soka Gakkai” mean “Value-Creating Education”. The organization was started by two Japanese educators, Tsunisaburo Makiguchi and Josei Toda, both of whom were imprisoned by their government during World War II because of their oppo-

sition to militarism. Makiguchi died as a result of his imprisonment, but Josei Toda went on to found a large and vigorous educational organization dedicated to culture, humanism, world peace and nuclear abolition.

The SGI-International website states that “For most of his life Makiguchi’s central concern was to reform the education system that, he felt, discouraged independent thinking and stifled students’ happiness and creativity. He believed that education should serve the happiness of the students, rather than the needs of the state. His educational ideas, and his theory of value-creation (soka), which underlies his pedagogy, are explored in his 1930 work *Soka Kyoikugaku Taikei* (The Theory of Value-Creating Pedagogy). Makiguchi’s views completely contradicted the logic of the militarist government, which sought to use education to mold obedient, unquestioning servants of the state...

“Josei Toda (1900-1958) was an educator, publisher and entrepreneur who, as second president of the Soka Gakkai, revived the lay Buddhist organization after World War II, building it into a dynamic, popular movement.”

The Toda Declaration and Daisaku Ikeda’s Proposals

In 1957, before a cheering audience of 50,000 young Soka Gakkai members, Josei Toda declared nuclear weapons to be an absolute evil. He said that their possession is criminal under all circumstances, and he called the young people present to work untiringly to rid the world of all nuclear weapons.

Toda was the mentor of Daisaku Ikeda, the first president SGI-International. Every year, President Ikeda issues a Peace Proposal, calling for international understanding and dialogue, as well as nuclear abolition, and outlining practical steps by which he believes these goals may be achieved. In his 2013 Peace Proposal, Ikeda, noted that 2015 will be the 70th anniversary of the destruction of Hiroshima, and he proposed that the NPT review conference should take place in Hiroshima, rather than in New York. He proposed that this should be followed by “an expanded global summit for a nuclear-weapon-free world”

Ikeda was born in Tokyo, Japan, on January 2, 1928, the fifth of eight children, to a family of seaweed farmers. The devastation and senseless horror he witnessed as a teenager during World War II gave birth to a lifelong passion to work for peace, rooting out the fundamental causes of human conflict.

In 1947, at the age of 19, he met Josei Toda, educator and leader of the Soka Gakkai. Ikeda found in Toda an open and unaffected person, a man of unshakable conviction with a gift for explaining profound Buddhist concepts in logical, accessible terms. He soon found employment at one of Toda’s companies and later completed his education under the tutelage of Toda, who became his mentor in life.

Ikeda was one of the first major Japanese figures to call for normalization of relations with China. His call met with fierce criticism in Japan, but it also caught the attention of those, both in China and in Japan, who sought an easing of tensions between the two countries, including Chinese Premier Zhou Enlai. Today, Ikeda’s statement is widely recognized as



Figure 8.16: In 1957, before a cheering audience of 50,000 young Soka Gakkai members, Josei Toda declared nuclear weapons to be an absolute evil. He said that their possession is criminal under all circumstances, and he called on the young people present to work untiringly to rid the world of all nuclear weapons. Source: SGI International

having played a catalytic role in the process that culminated in the restoration of diplomatic ties between the two countries in 1972.

In the years after normalization, Ikeda engaged in a form of “citizen diplomacy” among the Cold War rivals, particularly between China and the Soviet Union, which at times seemed on the brink of full-scale conflict. During 1974 and 1975, he repeatedly visited China, the USSR and the US, meeting with Soviet Premier Aleksey Kosygin, Chinese Premier Zhou Enlai, US Secretary of State Henry Kissinger and other key figures. Conveying the concerns and aspirations of the leaders of these hostile powers, as well as the yearning for peace he had felt in his encounters with the ordinary citizens of each society, Ikeda worked to defuse tensions and help build the foundations for mutual understanding and dialogue.



Figure 8.17: Daisaku Ikeda at the age of 19. Josei Toda became his teacher and mentor.



Figure 8.18: **Daisaku Ikeda (born 1928), President of the 12-million-strong Buddhist organization Soka Gakkai International. Throughout his long life he has worked with courage and dedication for peace and international dialogue.**

8.11 Book review: “Hiroshima, August 6, 1945, a Silence Broken”

Why the book is important

The nuclear destruction of Hiroshima was a tragedy in itself, but its larger significance is that it started a nuclear arms race which today threatens to destroy human society and much of the biosphere.

Soka Gakkai

Soka Gakkai is a large Nichiren Buddhist religious group. Its 12 million members are centered primarily in Japan, but Soka Gakkai International (SGI) has groups in 192 countries. In Japanese, the words “Soka Gakkai” mean “Value-Creating Education”. The organization was started by two Japanese educators, Tsunisaburo Makiguchi and Josei Toda, both of whom were imprisoned by their government during World War II because of their opposition to militarism. Makiguchi died as a result of his imprisonment, but Josei Toda went on to found a large and vigorous educational organization dedicated to culture, humanism, world peace and nuclear abolition.

The Toda Declaration and Daisaku Ikeda’s Proposals

In 1957, before a cheering audience of 50,000 young Soka Gakkai members, Josei Toda declared nuclear weapons to be an absolute evil. He said that their possession is criminal under all circumstances, and he called the young people present to work untiringly to rid the world of all nuclear weapons.

Toda was the mentor of Daisaku Ikeda, the first president SGI. Every year, President Ikeda issues a Peace Proposal, calling for international understanding and dialogue, as well as nuclear abolition, and outlining practical steps by which he believes these goals may be achieved. In his 2013 Peace Proposal, Ikeda, noted that 2015 will be the 70th anniversary of the destruction of Hiroshima, and he proposed that the NPT review conference should take place in Hiroshima, rather than in New York. He proposed that this should be followed by “an expanded global summit for a nuclear-weapon-free world”

The Hiroshima Peace Committee and the last remaining hibakushas

In Japanese the survivors of injuries from the nuclear bombing of Hiroshima and Nagasaki are called “hibakushas”. Over the years, the Soka Gakkai Hiroshima Peace Committee has published many books containing their testimonies. The most recent of these books, “A Silence Broken”, contains the testimonies of 14 men, now all in their late 70’s or in their 80’s, who are among the last few remaining hibakushas. All 14 of these men have kept silent until now because of the prejudices against hibakushas in Japan, where they



Figure 8.19: *It was like a scene from hell.* Source: SGI International.

and their children are thought to be unsuitable as marriage partners because of the effects of radiation. But now, for various reasons, they have chosen to break their silence. Many have chosen to speak now because of the Fukushima disaster.

The testimonies of the hibakushas give a vivid picture of the hell-like horrors of the nuclear attack on the civilian population of Hiroshima, both in the short term and in the long term. For example, Shigeru Nonoyama, who was 15 at the time of the attack, says: “People crawling out from crumbled houses started to flee. We decided to escape to a safe place on the hill. We saw people with melted ears stuck to their cheeks, chins glued to their shoulders, heads facing in awkward positions, arms stuck to bodies, five fingers joined together and grab nothing. Those were the people fleeing. Not merely a hundred or two, The whole town was in chaos.”

“I saw the noodle shop’s wife leg was caught under a fallen pole, and a fire was approaching. She was screaming, ‘Help me! Help me!’ There were no soldiers, no firefighters. I later heard that her husband had cut off his wife’s leg with a hatchet to save her.”

“Each and every scene was hell itself. I couldn’t tell the difference between the men and the women. Everybody had scorched hair, burned hair, and terrible burns. I thought I saw a doll floating in a fire cistern, but it was a baby. A wife trapped under her fallen house was crying, ‘Dear, please help me, help me!’ Her husband had no choice but to leave her in tears.”

“...I hovered between life and death for three months, from August to October. When a fly landed on a festering wound, it would bleed white maggots in a few days. My mother shooed away the flies through the night with a fan through the night. She must have been desperately determined not to lose any more sons or daughters. My dangling skin dried and turned hard, like paper. My mother picked off the dried skin. She made a cream of straw ash and cooking oil, and applied it to my burnt head, face and fingertips, turning me black...”

8.11. BOOK REVIEW: “HIROSHIMA, AUGUST 6, 1945, A SILENCE BROKEN”²⁸⁹



Figure 8.20: *Burned beyond recognition.* Source: SGI International.



Figure 8.21: *Memories of August 6*. Source: SGI International.



Figure 8.22: *The effects lasted a lifetime*. Source: SGI International.



Figure 8.23: *After the bombing.* Source: SGI International.

The testimonies of the other hibakushas are equally horrifying.

The postwar nuclear arms race

On August 29, 1949, the USSR exploded its first nuclear bomb. It had a yield equivalent to 21,000 tons of TNT, and had been constructed from Pu-239 produced in a nuclear reactor. Meanwhile the United Kingdom had begun to build its own nuclear weapons.

The explosion of the Soviet nuclear bomb caused feelings of panic in the United States, and President Truman authorized an all-out effort to build superbombs using thermonuclear reactions - the reactions that heat the sun and stars. On October 31, 1952, the first US thermonuclear device was exploded at Eniwetok Atoll in the Pacific Ocean. It had a yield of 10.4 megatons, that is to say it had an explosive power equivalent to 10,400,000 tons of TNT. Thus the first thermonuclear bomb was five hundred times as powerful as the bombs that had devastated Hiroshima and Nagasaki. The Soviet Union and the United Kingdom were not far behind.

In 1955 the Soviets exploded their first thermonuclear device, followed in 1957 by the UK. In 1961 the USSR exploded a thermonuclear bomb with a yield of 58 megatons. A bomb of this size, two thousand times the size of the Hiroshima bomb, would destroy a city completely even if it missed it by 50 kilometers. France tested a fission bomb in 1966 and a thermonuclear bomb in 1968. In all about thirty nations contemplated building nuclear weapons, and many made active efforts to do so.

Because the concept of deterrence required an attacked nation to be able to retaliate massively even though many of its weapons might be destroyed by a preemptive strike, the production of nuclear warheads reached insane heights, driven by the collective paranoia of the Cold War. More than 50,000 nuclear warheads were produced worldwide, a large number of them thermonuclear. The collective explosive power of these warheads was equivalent to 20,000,000,000 tons of TNT, i.e., 4 tons for every man, woman and child on

the planet, or, expressed differently, a million times the explosive power of the bomb that destroyed Hiroshima. Today, the collective explosive power of all the nuclear weapons in the world is about half that much, but still enough to destroy human society.

There are very many cases on record in which the world has come very close to a catastrophic nuclear war. One such case was the Cuban Missile Crisis. Robert McNamara, who was the US Secretary of Defense at the time of the crisis, had this to say about how close the world came to a catastrophic nuclear war: "I want to say, and this is very important: at the end we lucked out. It was luck that prevented nuclear war. We came that close to nuclear war at the end. Rational individuals: Kennedy was rational; Khrushchev was rational; Castro was rational. Rational individuals came that close to total destruction of their societies. And that danger exists today."

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. Gray, Chairman, National Institute for Public Policy, expressed this concern as follows: "The problem, indeed the enduring problem, is that we are resting our future upon a nuclear deterrence system concerning which we cannot tolerate even a single malfunction". Bruce G. Blair (Brookings Institute) 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."

As the number of nuclear weapon states grows larger, there is an increasing chance that a revolution will occur in one of them, putting nuclear weapons into the hands of terrorist groups or organized criminals. Today, for example, Pakistan's less-than-stable government might be overthrown, and Pakistan's nuclear weapons might end in the hands of terrorists. The weapons might then be used to destroy one of the world's large coastal cities, having been brought into the port by one of numerous container ships that dock every day, a number far too large to monitored exhaustively. Such an event might trigger a large-scale nuclear conflagration.

Recent research has shown that a large-scale nuclear war would be an ecological catastrophe of enormous proportions, producing very large-scale famine through its impact on global agriculture, and making large areas of the world permanently uninhabitable through long-lived radioactive contamination.

How do these dangers look in the long-term perspective? Suppose that each year there is a certain finite chance of a nuclear catastrophe, let us say 1 percent. Then in a century the chance of a disaster will be 100 percent, and in two centuries, 200 percent, in three centuries, 300 percent, and so on. Over many centuries, the chance that a disaster will take place will become so large as to be a certainty. Thus by looking at the long-term future, we can see that if nuclear weapons are not entirely eliminated, civilization will not survive.

We will do well to remember Josei Toda's words: "Nuclear weapons are an absolute evil. Their possession is criminal under all circumstances"

8.12 Book review: Aurelio Pecci and Daisaku Ikeda, “Before It’s Too Late”

This book was published in 1984 in English, French, German, Italian and Japanese. Far from being out of date, it is even more urgently relevant today than when it was published. It is a dialogue between two great men, Aurelio Peccei and Daisaku Ikeda. Their greatness is both moral and intellectual.

Aurelio Peccei (1908-1984) was the principal founder of the Club of Rome, an organization whose 1972 report, “Limits to Growth” first called to the world’s attention the impossibility of constantly-increasing economic growth on a finite planet.

The second author, Daisaku Ikeda (1928-), is the founding President of Soka Gakkai International (SGI), a 12-million-strong lay Buddhist organization with members in 192 countries or regions.

The Japanese words “Soka Gakkai” mean “Value-Creating Education”, and the members of SGI are strongly committed to working for peace, international understanding, and the complete abolition of nuclear weapons.

“Before It Is Too Late” is a comprehensive discussion of the urgent need to re-establish human respect for nature, and harmony with nature.

It is even more clear today than it was 30 years ago that, unless it is checked, unrestrained commercial exploitation of the environment, will lead to an environmental megacatastrophe.

Today there is unequivocal scientific evidence that if the use of fossil fuels is not replaced by 100% renewable energy within the next few decades, we will pass a tipping point.

Beyond this point, feed-back mechanisms for global warming will take over and lead us uncontrollably to catastrophic climate change.

There is a danger that human actions will produce a 6th extinction event comparable to five largest events that are found in the geological record. During each of these, more than half the species of living organisms became extinct.

Although Aurelio Peccei and Daisaku Ikeda did not have this new scientific information available when they were writing their important dialogue, they nevertheless were acutely aware of the environmental damage caused by the unrestrained activities of industrial civilization.

An initial statement by Aurelio Pecci

Here are some quotations from Peccei’s introductory remarks:

“Paradoxically, man has never been so much in danger as he is now, at the peak of his power. .. Mesmerized by our own power, we do what we can do, not what we ought to do...

“The consequences of our misjudgement and our irresponsible behaviour are quite evident. We have vanquished so many diseases without reducing our

reproductive fertility, with the result that the world population is multiplying phenomenally...

"Today, in a time of quarrelsome so-called sovereign states that lose no opportunity to arm themselves to the teeth, the way we have enormously developed military technologies means that humanity is actually playing with fire...

"Hurtling on full speed ahead and indulging our propensity for material possessions and consumption, we have dramatically swelled the global demand for goods, foods and services...

"We have created artificial needs, artfully expanding the range of what is considered indispensable by constantly renewing fashions, and designing products with built-in technological obsolescence.

"The only way we have devised to meet the surging waves of our rampant militarism and consumerism is to draw increasingly on the natural environment and to exploit, indiscriminately, the most accessible mineral and fuel deposits and all living resources we can lay our hands on...

"Such actions irreversibly impoverish our unique, irreplaceable world, whose bounty and generosity are not infinite. Even if all other adverse situations in which we find ourselves today were to be alleviated, in itself, our high-handed treatment of Nature can bring about our doom."

President Daisaku Ikeda replies

In the dialogue, President Ikeda supports Peccei's analysis and adds:

"While striving to reduce the numbers of their unemployed, increase their military arsenals, and stimulate industry in their own lands, politicians continue to hold out to their own peoples the dream of a richer society. Economists continue to try to invigorate economic growth, probably because development and growth in business are directly linked with support of their own social positions. Technocrats follow a similar course,,,

"Sympathizers with the stands of overly optimistic politicians, economists and technicians condemn indications of the gravity of the situation on the grounds that they weaken people's will to grow and develop. In Japan, this attitude has led the Ministry of Education to request publishers of primary and middle-school textbooks to delete pictures of the atomic bombings as intolerable horrible, and to change articles about industries that pollute the environment.

"The ministry is guilty of putting the cart before the horse. What it should be insisting on is the prevention of production, stockpiling and use of the nuclear weapons responsible for the horrors that it deplors in the textbook illustrations. People who assume an optimistic stance in connection with polluting industries and reckless consumption of the world's natural resources are guilty of similar folly."

A Human Revolution

Both authors agree that, in order to avoid the dangers of ecological, economic or thermonuclear catastrophe, a Human Revolution is necessary. By this they mean a revolution in the way that humans think of themselves.

The two authors agree that this will require a reform of current educational systems. President Ikeda, who has spent many years establishing reformed educational institutions throughout the world, is extremely well qualified to discuss this issue.

The reader will find much in this book that is vitally important to our current situation.

It is like a musical composition which constantly returns to the theme of harmony between humans and Nature and between humans and other humans, with a richness of variations on these themes that progressively builds up our understanding.

8.13 SGI Denmark

For many years I have worked with the Danish National Group of Pugwash Conferences on Science and World Affairs. In 2007 we arranged for Dr. Tadatoshi Akeba, the Mayor of Hiroshima, to visit Copenhagen and meet Copenhagen's Lord Mayor, Ritt Bjerregaard. The meeting was a great success, and, as we had hoped, Copenhagen joined the Mayors for Peace organization, despite a Danish regulation that forbids mayors from expressing themselves on foreign policy issues.

One of the greatest benefits of Dr. Akiba's visit was that it brought us into contact with the Danish branch of SGI. Getting to know and cooperate with SGI Denmark and its leaders, Jan Møller and Mark Kamio, as well as many others in the organization, has been a great joy to me personally, and it has greatly helped the work for peace of our Danish Pugwash Group. Like the Quakers, and a few other religious groups, SGI is dedicated to working courageously and actively for peace, international understanding, and the total abolition of nuclear weapons.

We soon found that it was convenient to have our Pugwash meetings at SGI Denmark's beautiful Nordic Cultural Center, enjoying the wonderful hospitality of Jan and Mark and the others. I also began the practice of traveling to Askov College in Jutland twice a year to lecture about nuclear dangers to visiting students from the Soka University, Tokyo. Also, for three years in a row, I had the privilege of being invited to give a half-hour speech on Hiroshima Day (August 6) at SGI Denmark's annual summer course. It was an enormous pleasure to speak to the 400 or so enthusiastic SGI members assembled for the course.



Figure 8.24: In 2007, we decided to invite Dr. Tadatoshi Akeba, the Mayor of Hiroshima, to visit Copenhagen.



Figure 8.25: We arranged for survivors of the destruction of Hiroshima to meet Copenhagen's Cultural Mayor, Pia Allerslev.



Figure 8.26: SGI's beautiful Nordic Cultural Center, at A.F. Kriegersvej 3, Copenhagen.



Figure 8.27: An SGI event in which I participated. On the right are Jan Møller, President of SGI Denmark, and the famous Danish actress Mia Lyhne.



Figure 8.28: Another SGI event: Hiroshima Day at Askov College. In the front row, from left to right, we see the Japanese Ambassador and his wife, Tom Børsen, myself, Maj Britt Theorin President of the International Peace Bureau, Caecilie Buhmann, and Maj Britt's husband. On the far right are Jens Junghans, Mark Kamio and Jan Møller. Holger Terp can be seen just behind Maj Britt Theorin.



Figure 8.29: One of the wonderful students from Soka University in Tokyo. Two times a year for many years I lectured to them on the history of Pugwash Conferences, and the current situation in the struggle to abolish nuclear weapons.



Figure 8.30: A meeting between President Daisaku Ikeda and Sir Joseph Rotblat.

8.14 Full List of Published Dialogues of Daisaku Ikeda

1. "Civilization, East and West", with Richard Coudenhove-Kalergi, Japanese, (1972)
2. "On the Japanese Classics", with Makoto Nemoto English, Japanese (1974), Portuguese, Thai
3. "Choose Life: A Dialogue" with Arnold J. Toynbee, Bengali, Bulgarian, Chinese (simplified and traditional), Czech, Dutch, English, Filipino, French, German, Hindi, Hungarian, Indonesian, Italian, Japanese (1975), Korean, Laotian, Malay, Nepali, Polish, Portuguese, Russian, Serbian, Sinhalese, Spanish, Swahili, Thai, Turkish, Urdu, Vietnamese
4. "On Living", with Konosuke Matsushita, Chinese (simplified and traditional), Korean, Japanese (1975)
5. "Changes Within: Human Revolution vs. Human Condition", with André Malraux, Japanese (1976)
6. "Letters of Four Seasons", with Yasushi Inoue, Chinese (simplified), English, French, Japanese (1977), Malay, Thai
7. "Dawn After Dark", with René Huyghe, Chinese (simplified), English, French (1980), Japanese, Portuguese, Spanish, Thai
8. "Before It Is Too Late", with Aurelio Peccei, Bulgarian, Chinese (simplified and traditional), Danish, English, French, German, Indonesian,

- Italian, Japanese (1984), Korean, Malay, Portuguese, Spanish, Swedish, Thai, Vietnamese
9. “Human Values in a Changing World”, with Bryan Wilson, Chinese (simplified and traditional), English, French, Italian, Japanese (1985), Portuguese, Spanish, Thai
 10. “The Third Rainbow Bridge”, with Anatoli A. Logunov, Chinese (simplified), Japanese (1987), Russian
 11. “Philosophy of Human Peace”, with Henry Kissinger, Japanese (1987)
 12. “Humanity at the Crossroads”, with Karan Singh, English, Japanese (1988), Thai
 13. “Search for a New Humanity”, with Josef Derbolav, Chinese (simplified), English, German (1988), Japanese, Thai
 14. “A Lifelong Quest for Peace”, with Linus Pauling, Chinese (simplified and traditional), English, Filipino, French, Japanese (1990), Korean, Malay, Russian, Spanish, Vietnamese
 15. “The Radiance of Dunhuang: On Beauty and Life”, with Chang Shuhong, Chinese (simplified and traditional), Japanese (1990)
 16. “Dialogue Between Citizens of the World”, with Norman Cousins, Japanese (1991)
 17. “The Sun and the Good Earth: An Ode to Pioneering Japanese Immigrants”, with Ryoichi Kodama, Japanese(1991), Kyrgyz, Portuguese
 18. “Ode to the Grand Spirit”, with Chingiz Aitmatov, English, German, Japanese (1991), Kyrgyz, Russian
 19. “Dialogue on Humanity and Culture”, with Kenji Doi, Japanese (1991)
 20. “Space and Eternal Life”, with Chandra Wickramasinghe, English, Japanese (1992), Portuguese
 21. “Science and Religion”, with Anatoli A. Logunov, Japanese (1994) , Russian
 22. “Human Rights in the Twenty-First Century”, with Austregésilo de Athayde, English, Japanese (1995), Portuguese
 23. “Choose Peace”, with Johan Galtung, English, Italian, Japanese (1995), Korean, Thai

24. "Moral Lessons of the Twentieth Century", with Mikhail Gorbachev, Chinese (simplified and traditional), English, French, German, Greek, Icelandic, Italian, Japanese (1996), Korean, Russian, Slovakian
25. "Dawn of the Pacific", with Patricio Aylwin Azócar, Japanese (1997), Spanish
26. "The Tempestuous Life of Napoleon", with Philippe Moine, Patrice Morlat and Tadashige Takamura, Japanese (1997)
27. "Compassionate Light in Asia", with Jin Yong, Chinese (simplified and traditional), English, Japanese (1998)
28. "The Path to the Land of Children", with Albert A. Likhanov, Chinese (simplified and traditional), Japanese (1998), Russian
29. "A Lion's Heart", with Axinia Djourova, Bulgarian, Japanese (1999)
30. "On Being Human: Where Ethics, Medicine and Spirituality Converge", with René Simard and Guy Bourgeault, Chinese (traditional), English, French, Italian, Japanese (2000), Vietnamese
31. "Global Civilization: A Buddhist-Islamic Dialogue", with Majid Tehrani, Arabic, Chinese (traditional), Dutch, English, French, Hebrew, Indonesian, Italian, Japanese (2000), Malay, Persian, Thai
32. "José Martí, Cuban Apostle", with Cintio Vitier, English, Japanese (2001), Spanish
33. "Choose Hope", with David Krieger, English, Italian, Japanese (2001)
34. "Distinct Encounters", with Rogelio M. Quiambao, English, Japanese (2001)
35. "Dialogue on World Literature", with Tadashige Takamura and Philippe Moine; Kentaro Nishihara and Rogelio M. Quiambao; Ryohei Tanaka and Hirotomo Teranishi; Tadashige Takamura and Henry Indangasi, Japanese (2001)
36. "Beyond the Century: Dialogue on Education and Society", with Victor A. Sadovnichy, Chinese (traditional), Japanese (2002), Russian
37. "Dialogue on Oriental Wisdom", with Ji Xianlin and Jiang Zhongxin, Chinese (simplified and traditional), Japanese (2002)
38. "Buddhism: A Way of Values", with Lokesh Chandra, English, Korean, Japanese (2002)

39. "The Bridge toward a Century of Hope", with Cho Moon Boo, Korean, Japanese (2002)
40. "Planetary Citizenship", with Hazel Henderson, Chinese (simplified and traditional), English, French, Italian, Japanese (2002), Portuguese
41. "The Illuminating Power of Learning", with Victor A. Sadovnichy, Chinese (traditional), Japanese (2004)
42. "The Cosmos, Earth and Human Beings", with Alexander Serebrov, Japanese (2004), Korean, Russian
43. "A Rainbow Bridge of Humanity and Culture", with Cho Moon Boo, Japanese (2005)
44. "Our World To Make: Buddhism and the Rise of Global Civil Society", with Ved Prakash Nanda, English, Japanese (2005)
45. "Toward Creating an Age of Humanism", with John Kenneth Galbraith, Japanese (2005)
46. "A Dialogue Between East and West: Looking to a Human Revolution", with Ricardo Díez-Hochleitner, English, Japanese (2005), Malay, Spanish
47. "Into Full Flower: Making Peace Cultures Happen", with Elise Boulding, English, Japanese (2006)
48. "Revolutions: to green the environment, to grow the human heart", with M. S. Swaminathan, English (2005), Italian, Japanese, Vietnamese
49. "A Quest for Global Peace", with Joseph Rotblat, Chinese (traditional), English, German, Italian, Japanese (2006)
50. "Creating Waldens: An East-West Conversation on the American Renaissance", with Ronald A. Bosco and Joel Myerson, English, Japanese (2006)
51. "New Horizons in Eastern Humanism: Buddhism, Confucianism and the Quest for Global Peace", with Tu Weiming, Chinese (simplified and traditional), English, Japanese (2007)
52. "The Humanist Principle: On Compassion and Tolerance", with H. C. Felix Unger, English, Italian, Japanese (2007)
53. "A Passage to Peace: Global Solutions from East and West" with Nur Yalman, English, Japanese (2007), Malay

54. “Grand Steppes of Friendship”, with Dojoogiin Tsedev, Japanese (2007), Mongolian
55. “The Persistence of Religion: Comparative Perspectives on Modern Spirituality”, with Harvey Cox, Chinese (traditional), English, Japanese (2008)
56. “Walking with the Mahatma: Gandhi for Modern Times”, with Neelakanta Radhakrishnan, English, Chinese (traditional), Japanese (2009), Malayalam, Tamil
57. “A Journey on the Path of Culture and the Arts”, with Jao Tsung-I, Chinese (simplified and traditional), Japanese (2009)
58. “A Dialogue on Astronomy and Buddhism”, with Ronaldo Rogério de Freitas Mourão, Chinese (traditional), Japanese (2009), Portuguese
59. “A Message to the Century of Human Rights”, with Adolfo Pérez Esquivel, Italian, Japanese (2009), Spanish
60. “Shaping the Future: The Sacred Task of Education”, with Hans Henningsen, Danish, Japanese (2009)
61. “The Noble Path of Education and Culture”, with Chang Jen Hu, Chinese (traditional), Japanese (2010)
62. “The Wisdom of Tolerance: A Philosophy of Generosity and Peace”, with Abdurrahman Wahid, English, Indonesian, Japanese (2010)
63. “An Epoch of Human Triumph: A Dialogue on History, Life and Education”, with Zhang Kaiyuan, Chinese (simplified and traditional), Japanese (2010)
64. “The Inner Philosopher: Conversations on Philosophy’s Transformative Power”, with Lou Marinoff, Chinese (simplified), English, Italian, Japanese (2011)
65. “The Great Light of Education toward the Dawn of Peace: Ukraine-Japan Friendship”, with Michael Z. Zgurovsky, Japanese (2011), Russian, Ukrainian
66. “Creating a New Global Society—A Discourse on the United Nations and a Culture of Peace”, with Anwarul K. Chowdhury, Chinese (traditional), Japanese (2011)
67. “Napoléon of the Twenty-first Century: A Conversation on the Spirit of Creating History”, with Charles Napoléon, Japanese (2011)

68. “Connecting the World through the Power of Culture”, with Gao Zhanxiang, Chinese (simplified) (2012), Japanese
69. “Humanistic Education, A Bridge to Peace”, with Gu Mingyuan, Chinese (simplified), Japanese (2012)
70. “America Will Be! : Conversations on Hope, Freedom, and Democracy”, with Vincent Harding, English, French, Japanese (2012)
71. “Reaching Beyond: Improvisations on Jazz, Buddhism, and a Joyful Life”, with Herbie Hancock and Wayne Shorter, English, Japanese (2013)
72. “The Mission of Education in Tomorrow’s World—Thoughts on Humanity in the 21st Century”, with Victor Sadovnichy, Japanese (2013)
73. “The Art of True Relations: Conversations on the Poetic Heart of Human Possibility”, with Sarah Wider, English, Italian, Japanese (2013)
74. “Living As Learning: John Dewey in the 21st Century”, with Jim Garrison and Larry Hickman, English, Japanese (2014)
75. “Peace, Justice and the Poetic Mind: Conversations on the Path of Non-violence”, with Stuart Rees, English, Japanese (2014)
76. “Knowing Our Worth—Conversation on Energy and Sustainability”, with Ernst Ulrich von Weizsäcker, English, German, Italian, Japanese (2014)
77. “The Light of Life Songs of Mothers”, with Jutta Unkart-Seifert, Japanese (2015)
78. “Global Citizenship: Toward a Civilization of Wisdom, Love and Peace”, with José Veloso Abueva, English, Japanese (2015)
79. “Shaping a New Society: Conversations on Economics, Education, and Peace”, with Lawrence J. Lau, Chinese (traditional), English, Japanese (2015)
80. “Song for a New Global Civilization: Conversations on Tagore and World Citizens”, with Bharati Mukherjee, English, Japanese (2016)
81. “Toward a Century of Peace: A Dialogue on the Role of Civil Society in Peacebuilding”, with Kevin Clements, English, Japanese (2016)
82. “A Philosophy of Life for Future Generations: Learning from Literature and People”, with Wang Meng, Chinese (simplified and traditional), Japanese (2017)

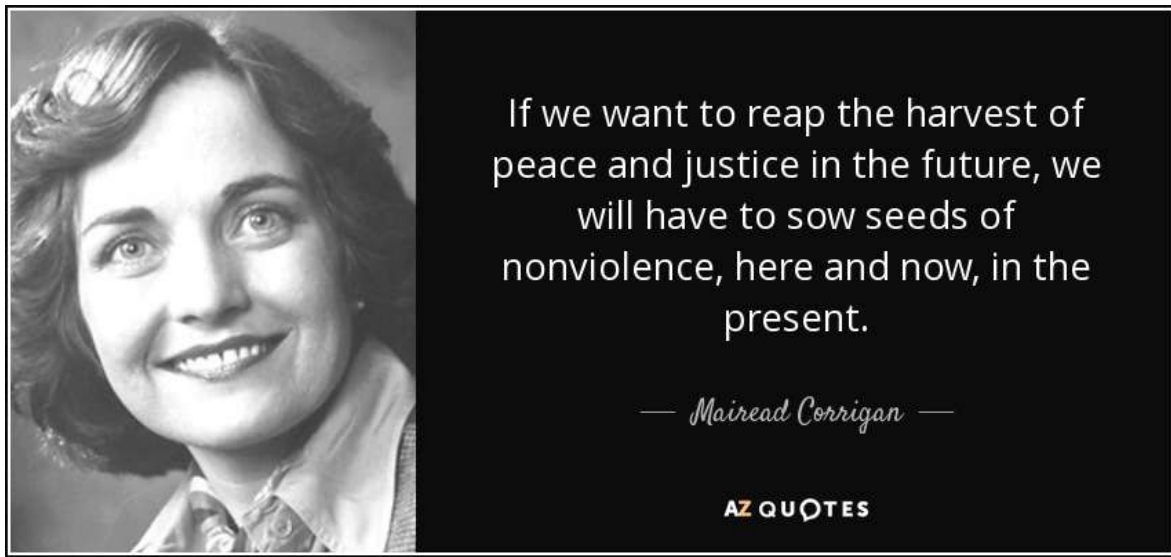


Figure 8.31:

8.15 Mairead Corrigan Maguire

Mairead Corrigan was born in 1944. She was the second of eight children of a Catholic family in Belfast, Ireland. In 1976, an event occurred which led Mairead to become a peace activist. Her sister Anne Maguire and three of Anne's children were run over and killed by a car driven by a Provisional Irish Republican Army (PIRA) member who had been fatally shot by British troops while trying to escape. Mairead Corrigan and Betty Williams became leaders of a "virtually spontaneous mass movement" of both Catholic and Protestant women protesting against violence and urging both sides to settle the conflict peacefully.

A march of 10,000 women to the burial place of the three Maguire children, in which both Catholics and Protestants took part, was physically attacked by members of the PIRA. Later the same month, the movement mobilized 35,000 protesters against violence on the streets of Belfast. The movement was initially called "Women for Peace", but later changed its name to the gender-neutral "Community of Peace People", or simply "Peace People". The movement's two leaders, Betty Williams and Mairead Corrigan, were awarded the 1976 Nobel Peace Prize.

In 1980, after a prolonged struggle with depression following the loss of three of her children, Mairead's sister, Anne Maguire committed suicide. A year and a half later, Mairead Corrigan married her sister's widower, Jackie Maguire.

Although Mairead Corrigan Maguire has continued to work with Peace People until the present, the scope of her work for peace and non-violence has broadened greatly.

Here are a few things that Mairead Corrigan Maguire said:

Our common humanity is more important than all the things that divide us.



Figure 8.32: Mairead Corrigan Maguire (born 1944). She and Betty Williams shared the 1976 Nobel Peace Prize for founding and leading Peace People, an organization working for peace in Northern Ireland. Today Maguire's concerns are global. She opposed the Iraq Wars of 1990 and 2003, and the sanctions that caused hundreds of thousands of deaths among the civilians of Iraq. She is critical of US militarism and wars, nuclear weapons wherever they are found, and Israel's occupation of Gaza. At the Russell Tribunal in 2012, she "asked the question that seems to be taboo in the U.S.: Why does President Barack Obama allow Israel to threaten Iran with war when Iran has signed the NPT and Israel has at least 200 nuclear weapons? Why does the president not demand that Israel sign the NPT?" Regarding nuclear weapons, she said "I have for years been speaking out against nuclear weapons. I am actively opposed to nuclear weapons in Britain, in the United States, in Israel, in any country, because nuclear weapons are the ultimate destruction of humankind." Together with Desmond Tutu and Adolfo Pérez Esquivel, Mairead Maguire has also published a letter in support of Chelsea Manning. In 2019, she nominated Julian Assange for the Nobel Peace Prize.

It's okay to be scared, but fear is different. Fear is when we let being scared prevent us from doing what love requires of us.

We have really got to create a culture in our world today where we recognize that every human life is sacred and precious and we have no right to take another human life.

We frail humans are at one time capable of the greatest good and, at the same time, capable of the greatest evil. Change will only come about when each of us takes up the daily struggle ourselves to be more forgiving, compassionate, loving, and above all joyful in the knowledge that, by some miracle of grace, we can change as those around us can change too.

We are all invited to work together for peace. We shall join hands and minds to work for peace through active nonviolence. We shall help one another, encourage one another and learn from one another how to bring peace to our children and to all.

We have to start from the fact that there are always alternatives to violence.

We need radical thinking, creative ideas, and imagination.

I witnessed a lot of violence, and I found myself asking the question: Do you ever use violence to try to bring about political change?

Love for others and respect for their rights and their human dignity, irrespective of who or what they are, no matter what religion - or none - that they choose to follow, will bring about real change and set in motion proper relationships. With such relationships built on equality and trust, we can work together on so many of the threats to our common humanity.

Every day there are people in our world that do absolutely amazing things. People of all ages are very capable of doing tremendous, courageous things in spite of their fear.

Perhaps the greatest contribution that those of us who come from a Christian tradition can make is to throw out the old just-war theory, embrace the nonviolence of Jesus, refuse to kill one another, and truly follow his commandment to "love our enemies".

I believe that hope for the future depends on each of us taking nonviolence into our hearts and minds and developing new and imaginative structures which are

nonviolent and life-giving for all.

We need now to build a culture of genuine nonviolence and real democracy.

One great hope lies in the fact that there is a new consciousness in our World, particularly among young people.

Once we link up and network, there will be new institutions, new beginnings, and a change in the economy because capitalism is destroying many people's lives. It's just one leap to think in a different way.

To enable consensus politics to develop we need to empower people where they live. This means devolving financial resources and political power down to the community level. One of the greatest blocks to movement is fear. This fear can only be removed when people feel their voices are being heard by government and when they have a say in their own lives and communities.

...I believe, with Gandhi, that we need to take an imaginative leap forward toward fresh and generous idealism for the sake of all humanity - that we need to renew this ancient wisdom of nonviolence, to strive for a disarmed world, and to create a culture of nonviolence.

I have always been inspired by the American peace movement because it is operating in a very hard and militarist environment.

I believe we are on the edge of a quantum leap into a whole new way of organizing and living as a human family.

When I visited Auschwitz I was horrified. And when I visited Iraq, I thought to myself, 'What will we tell our children in fifty years when they ask what we did when the people in Iraq were dying.'

I think Assange has been very courageous. I've also defended Bradley Manning. I think they've been tremendously courageous in telling the truth, and the public has the right to the truth.



Figure 8.33: In 1981, Mairead Corrigan married her sister Anne's widower, Jackie Maguire.

Drop the Just War theory and abolish nuclear weapons

Here are excerpts from a 2016 article by Mairead Corrigan Maguire:¹

Isn't it strange how war has always found legitimacy by some "thinkers" or "moral" philosophers?

Did you ever hear about just human rights violations? Just genocide? Just poverty? Just gender violence? Just destruction of Nature? Just child labour? - like "if only it's proportional to the challenge we see and we try our best to follow some rules of the fighting it's OK"?

Something very important happened a couple of weeks ago - missed of course by virtually all near-governmental media:

Members of a three day event in Rome co-hosted by the Pontifical Council for Justice and Peace and the International Catholic Peace Movement Organization, Pax Christi, strongly called on Pope Francis:

"To share with the world an encyclical on nonviolence and Just Peace; and on

¹<https://www.pressenza.com/2016/05/drop-just-war-theory-abolish-nuclear-weapons/>

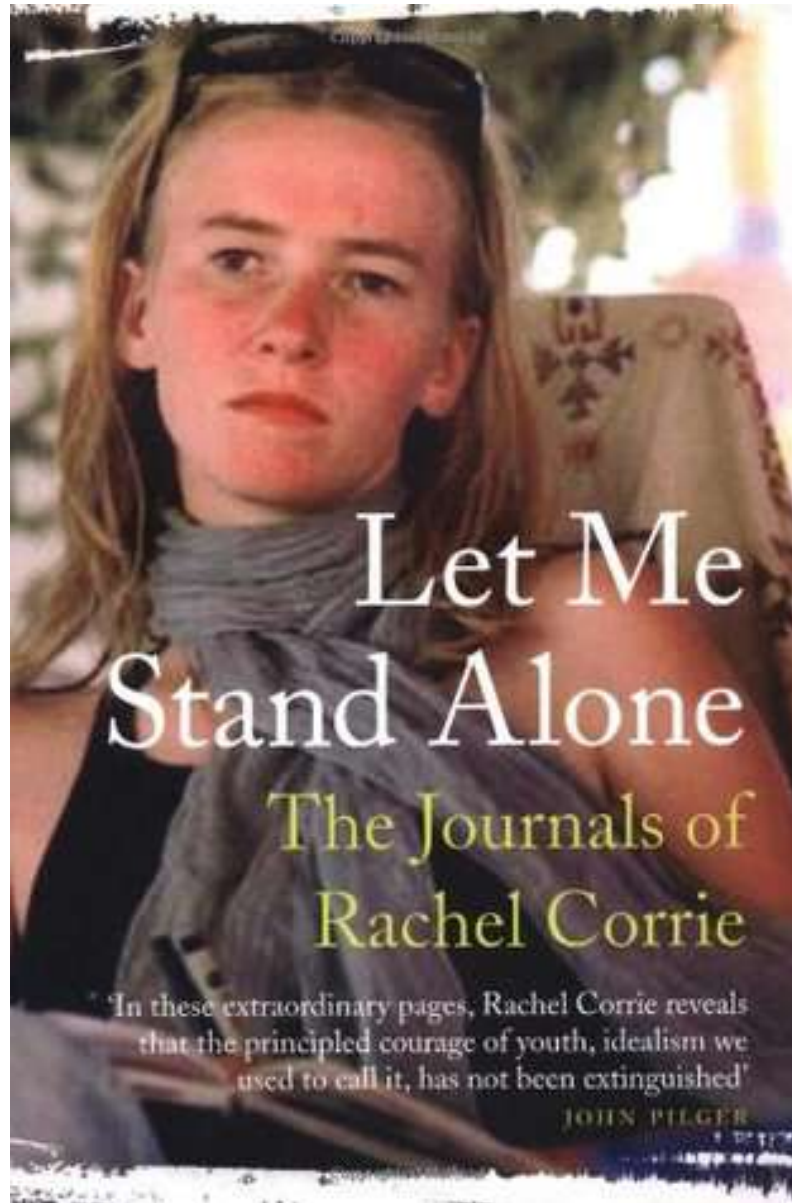


Figure 8.34: Rachael Corrie was killed when she stood in front of an Israeli bulldozer to prevent it from destroying the houses of Palestinians. The bulldozer driver ran over Rachael repeatedly to make sure that she was dead. Mairead Corrigan Maguire recently sailed on a small ship named after Rachael Corrie in an attempt to break Israel's illegal blockade of Gaza.

the Church to no longer use or teach ‘just war theory’; and continue advocating for the abolition of war and nuclear weapons”.

Mrs. Maguire later added the following comments:²

I believe the misguided age of ‘blessing wars, militarism and killing’ must become abolished and the responsibility lies with Pope Francis and religious/spiritual leaders to be true shepherds of Peace and Nonkilling/nonviolence following the command of Jesus to love our enemies and not kill each other.

I hope also that Pope Francis will unambiguously proclaim that ‘Violence is always wrong, it is not the way of Jesus’ and reject militarism thereby calling upon Catholics not to join armies and take up arms to kill people, thus becoming a true peace church.

The Appeal is now in the hands of Pope Francis, and we can now work, fast, pray, for an Nonkilling/Nonviolence Encyclical - and hope that Pope Francis will continue to show courage, be brave and bold, a true Prophet, a loving Shepherd and a bright light in these dark days for all the human family, which he has so rightly describes as ‘this unique and terrible world war in instalments’.

8.16 Peace education

Traditional school systems aim at indoctrination in nationalism

School systems have traditionally aimed at producing nationalism in their students. Within the Roman Empire, students were taught the motto “Dulce et decorum est pro patria mori” (It is sweet and noble to die for one’s country). In the era when the sun never set on the British Empire, schoolboys in England were taught the same motto, and the Roman Empire was held up as an ideal. One said the “The battle of Waterloo was won on the playing fields of Eton”.

If the reader will excuse a personal note, I can remember attending elementary schools in the United States where every morning we pledged allegiance to the US flag. With hands on our hearts, we students repeated “I pledge allegiance to the flag of the United States of America, and to the Republic for which it stands - one nation, indivisible, with liberty and justice for all.” I believe that with small changes in wording, this ceremony is repeated every day today in all American schools.

I can also remember, later on, my great surprise in learning that many of the wars conducted by the United States have been aggressive and unjust. There had been no hint

²<http://blog.transnational.org/2016/04/tff-pressinfo-372-drop-the-just-war-theory-and-abolish-nuclear-weapons/>

of that in the history lessons of US schools. I believe that the situation is the same in every country. History lessons are an indoctrination in nationalism. In history, as it is taught, one's own country is always heroic and in the right.

Today, in an era of instantaneous communication, global economic and cultural interdependence, and all-destroying modern weapons, the absolutely sovereign nation-state has become a dangerous anachronism. Blind nationalism too, has become a dangerous anachronism. Therefore we need to reform our school systems, but the process of making the needed changes is slowed the habits of teachers and administrators, and by shelves full of nationalistic history books.

The urgent need for peace education

Since modern war has become prohibitively dangerous, there is an urgent need for peace education. Why do we pay colossal sums for war, which we know is the source of so much human suffering, and which threatens to destroy human civilization? Why not instead support peace and peace education?

In this section, we will see that many groups and individuals are already working for this goal. With even a little more support, they would be much more effective.

The growth of global consciousness

Besides a humane, democratic and just framework of international law and governance, we urgently need a new global ethic, - an ethic where loyalty to family, community and nation will be supplemented by a strong sense of the brotherhood of all humans, regardless of race, religion or nationality. Schiller expressed this feeling in his "Ode to Joy", a part of which is the text of Beethoven's Ninth Symphony. Hearing Beethoven's music and Schiller's words, most of us experience an emotion of resonance and unity with the message: All humans are brothers and sisters - not just some - all! It is almost a national anthem of humanity. The feelings that the music and words provoke are similar to patriotism, but broader. It is this sense of a universal human family that we need to cultivate in education, in the mass media, and in religion. We already appreciate music, art and literature from the entire world, and scientific achievements are shared by all, regardless of their country of origin. We need to develop this principle of universal humanism so that it will become the cornerstone of a new ethic.

Reformed teaching of history

Educational reforms are urgently needed, particularly in the teaching of history. As it is taught today, history is a chronicle of power struggles and war, told from a biased national standpoint. Our own race or religion is superior; our own country is always heroic and in the right.

We urgently need to replace this indoctrination in chauvinism by a reformed view of history, where the slow development of human culture is described, giving adequate credit

to all who have contributed. Our modern civilization is built on the achievements of many ancient cultures. China, Japan, India, Mesopotamia, Egypt, Greece, the Islamic world, Christian Europe, and the Jewish intellectual traditions all have contributed. Potatoes, corn, squash, vanilla, chocolate, chili peppers, pineapples, quinine, etc. are gifts from the American Indians. Human culture, gradually built up over thousands of years by the patient work of millions of hands and minds, should be presented as a precious heritage - far too precious to be risked in a thermonuclear war.

The teaching of history should also focus on the times and places where good government and internal peace have been achieved, and the methods by which this has been accomplished. Students should be encouraged to think about what is needed if we are to apply the same methods to the world as a whole. In particular, the histories of successful federations should be studied, for example the Hanseatic League, the Universal Postal Union, the federal governments of Australia, Brazil, Germany, Switzerland, the United States, Canada, and so on. The recent history of the European Union provides another extremely important example. Not only the successes, but also the problems of federations should be studied in the light of the principle of subsidiarity³. The essential features of federations should be clarified⁴, as well as the reasons why weaker forms of union have proved to be unsuccessful.

Reformed education of economists and businessmen

The education of economists and businessmen needs to face the problems of global poverty - the painful contrast between the affluence and wastefulness of the industrial North and the malnutrition, disease and illiteracy endemic in the South. Students of economics and business must look for the roots of poverty not only in population growth and war, but also in the history of colonialism and neocolonialism, and in defects in global financial institutions and trade agreements. They must be encouraged to formulate proposals for the correction of North-South economic inequality.

The economic impact of war and preparation for war should be included in the training of economists. Both direct and indirect costs should be studied. An example of an indirect cost of war is the effect of unimaginably enormous military budgets in reducing the amount of money available for solving the serious problems facing the world today.

Law for a united world

Law students should be made aware of the importance of international law. They should be familiar with its history, starting with Grotius and the Law of the Sea. They should know

³The principle of subsidiarity states that within a federation, decisions should be taken at the lowest level at which there are no important externalities. Thus, for example, decisions affecting air quality within Europe should be taken in Bruxelles because winds blow freely across national boundaries, but decisions affecting only the local environment should be taken locally.

⁴One of the most important of these features is that federations have the power to make and enforce laws that are binding on individuals, rather than trying to coerce their member states.

the histories of the International Court of Justice and the Nuremberg Principles. They should study the United Nations Charter (especially the articles making war illegal) and the Universal Declaration of Human Rights, as well as the Rome Treaty and the foundation of the International Criminal Court. They should be made aware of a deficiency in the present United Nations - the lack of a legislature with the power to make laws that are binding on individuals.

Students of law should be familiar with all of the details of the World Court's historic Advisory Opinion on Nuclear Weapons, a decision that make the use or threat of use of nuclear weapons illegal. They should also study the Hague and Geneva Conventions, and the various international treaties related to nuclear, chemical and biological weapons. The relationship between the laws of the European Union and those of its member states should be given high importance. The decision by the British Parliament that the laws of the EU take precedence over British law should be a part of the curriculum.

Teaching global ethics

Professors of theology should emphasize three absolutely central components of religious ethics: the duty to love and forgive one's enemies, the prohibition against killing, and the concept of universal human brotherhood. They should make their students conscious of a responsibility to give sermons that are relevant to the major political problems of the modern world, and especially to relate the three ethical principles just mentioned to the problem of war. Students of theology should be made conscious of their responsibility to soften the boundaries between ethnic groups, to contribute to interreligious understanding, and to make marriage across racial and religious boundaries more easy and frequent.

The social responsibility of scientists

In teaching science too, reforms are needed. Graduates in science and engineering should be conscious of their responsibilities. They must resolve never to use their education in the service of war, nor for the production of weapons, nor in any way that might be harmful to society or to the environment.

Science and engineering students ought to have some knowledge of the history and social impact of science. They could be given a course on the history of scientific ideas; but in connection with modern historical developments such as the industrial revolution, the global population explosion, the development of nuclear weapons, genetic engineering, and information technology, some discussion of social impact of science could be introduced. One might hope to build up in science and engineering students an understanding of the way in which their own work is related to the general welfare of humankind, and a sense of individual social and ethical responsibility. These elements are needed in science education if rapid technological progress is to be beneficial to society rather than harmful.

The changes just mentioned in the specialized lawyers, theologians, scientists and engineers should have a counterpart in elementary education. The basic facts about peace and war should be communicated to children in simple language, and related to the everyday

experiences of children. Teachers' training colleges ought to discuss with their student-teachers the methods that can be used to make peace education a part of the curriculum at various levels, and how it can be related to familiar concepts. They should also discuss the degree to which the painful realities of war can be explained to children of various ages without creating an undesirable amount of anxiety.

Peace education can be made a part of the curriculum of elementary schools through (for example) theme days or theme weeks in which the whole school participates. This method has been used successfully in many European schools. During the theme days the children have been encouraged to produce essays, poems and drawings illustrating the difference between peace and war, and between negative peace and positive peace⁵. Another activity has been to list words inspired by the concept "peace", rapidly and by free association, and to do the same for the concept "war". Drama has also been used successfully in elementary school peace education, and films have proved to be another useful teaching aid.

The problems of reducing global inequalities, of protecting human rights, and of achieving a war-free world can be introduced into grade school courses in history, geography, religion and civics. The curriculum of these courses is frequently revised, and advocates of peace education can take curriculum revisions as opportunities to introduce much-needed reforms that will make the students more international in their outlook. The argument (a true one) should be that changes in the direction of peace education will make students better prepared for a future in which peace will be a central issue and in which they will interact with people of other nations to a much greater extent than was the case in previous generations. The same can be said for curriculum revisions at the university level.

Large nations compared with global government

The problem of achieving internal peace over a large geographical area is not insoluble. It has already been solved. There exist today many nations or regions within each of which there is internal peace, and some of these are so large that they are almost worlds in themselves. One thinks of China, India, Brazil, Australia, the Russian Federation, the United States, and the European Union. Many of these enormous societies contain a variety of ethnic groups, a variety of religions and a variety of languages, as well as striking contrasts between wealth and poverty. If these great land areas have been forged into peaceful and cooperative societies, cannot the same methods of government be applied globally?

But what are the methods that nations use to achieve internal peace? Firstly, every true government needs to have the power to make and enforce laws that are binding on individual citizens. Secondly the power of taxation is a necessity. These two requirements of every true government have already been mentioned; but there is a third point that still remains to be discussed:

⁵Negative peace is merely the absence of war. In positive peace, neighboring nations are actively engaged in common projects of mutual benefit, in cultural exchanges, in trade, in exchanges of students and so on.

Within their own territories, almost all nations have more military power than any of their subunits. For example, the US Army is more powerful than the State Militia of Illinois. This unbalance of power contributes to the stability of the Federal Government of the United States. When the FBI wanted to arrest Al Capone, it did not have to bomb Chicago. Agents just went into the city and arrested the gangster. Even if Capone had been enormously popular in Illinois, the government of the state would have realized in advance that it had no chance of resisting the US Federal Government, and it still would have allowed the “Feds” to make their arrest. Similar considerations hold for almost all nations within which there is internal peace. It is true that there are some nations within which subnational groups have more power than the national government, but these are frequently characterized by civil wars.

Of the large land areas within which internal peace has been achieved, the European Union differs from the others because its member states still maintain powerful armies. The EU forms a realistic model for what can be achieved globally in the near future by reforming and strengthening the United Nations. In the distant future, however, we can imagine a time when a world federal authority will have much more power than any of its member states, and when national armies will have only the size needed to maintain local order.

Today there is a pressing need to enlarge the size of the political unit from the nation-state to the entire world. The need to do so results from the terrible dangers of modern weapons and from global economic interdependence. The progress of science has created this need, but science has also given us the means to enlarge the political unit: Our almost miraculous modern communications media, if properly used, have the power to weld all of humankind into a single supportive and cooperative society.

Culture, education and human solidarity

Cultural and educational activities have a small ecological footprint, and therefore are more sustainable than pollution-producing, fossil-fuel-using jobs in industry. Furthermore, since culture and knowledge are shared among all nations, work in culture and education leads societies naturally towards internationalism and peace.

Economies based on a high level of consumption of material goods are unsustainable and will have to be abandoned by a future world that renounces the use of fossil fuels in order to avoid catastrophic climate change, a world where non-renewable resources such as metals will become increasingly rare and expensive. How then can full employment be maintained?

The creation of renewable energy infrastructure will provide work for a large number of people; but in addition, sustainable economies of the future will need to shift many workers from jobs in industry to jobs in the service sector. Within the service sector, jobs in culture and education are particularly valuable because they will help to avoid the disastrous wars that are currently producing enormous human suffering and millions of refugees, wars that



Figure 8.35: **Cultural exchanges lead to human solidarity** (Public domain)

threaten to escalate into an all-destroying global thermonuclear war.⁶

Human nature has two sides: It has a dark side, to which nationalism and militarism appeal; but our species also has a genius for cooperation, which we can see in the growth of culture. Our modern civilization has been built up by means of a worldwide exchange of ideas and inventions. It is built on the achievements of many ancient cultures. China, Japan, India, Mesopotamia, Egypt, Greece, the Islamic world, Christian Europe, and the Jewish intellectual traditions all have contributed. Potatoes, corn, squash, vanilla, chocolate, chilli peppers, and quinine are gifts from the American Indians.⁷

We need to reform our educational systems, particularly the teaching of history. As it is taught today, history is a chronicle of power struggles and war, told from a biased national standpoint. We are taught that our own country is always heroic and in the right. We urgently need to replace this indoctrination in chauvinism by a reformed view of history, where the slow development of human culture is described, giving credit to all who have contributed. When we teach history, it should not be about power struggles. It should be about how human culture was gradually built up over thousands of years by the patient work of millions of hands and minds. Our common global culture, the music, science, literature and art that all of us share, should be presented as a precious heritage - far too precious to be risked in a thermonuclear war.

We have to extend our loyalty to the whole of the human race, and to work for a world not only free from nuclear weapons, but free from war. A war-free world is not utopian but very practical, and not only practical but necessary. It is something that we can achieve

⁶<http://www.fredsakademiet.dk/library/need.pdf>
<http://eruditio.worldacademy.org/issue-5/article/urgent-need-renewable-energy>
⁷<http://eruditio.worldacademy.org/article/evolution-cooperation>

and must achieve. Today there are large regions, such as the European Union, where war would be inconceivable. What is needed is to extend these.

Nor is a truly sustainable economic system utopian or impossible. To achieve it, we should begin by shifting jobs to the creation of renewable energy infrastructure, and to the fields of culture and education. By so doing we will support human solidarity and avoid the twin disasters of catastrophic war and climate change.

The Danish National Group of Pugwash Conferences on Science and World Affairs

In March, 1954, the US tested a hydrogen bomb at the Bikini Atoll in the Pacific Ocean. It was 1000 times more powerful than the Hiroshima bomb. The Japanese fishing boat, Lucky Dragon, was 130 kilometers from the Bikini explosion, but radioactive fallout from the test killed one crew member and made all the others seriously ill.

Concerned about the effects of a large-scale war fought with such bombs, or even larger ones, Albert Einstein and Bertrand Russell published a manifesto containing the words: "Here then is the problem that we present to you, stark and dreadful and inescapable: Shall we put an end to the human race, or shall mankind renounce war?... There lies before us, if we choose, continual progress in happiness, knowledge and wisdom. Shall we, instead, choose death because we cannot forget our quarrels? We appeal as human beings to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death."

The Russell-Einstein Manifesto called for a meeting of scientists from both sides of the Cold War to try to minimize the danger of a thermonuclear conflict. The first meeting took place in 1957 at the summer home of the Canadian philanthropist Cyrus Eaton at the small village of Pugwash, Nova Scotia.

From this small beginning, a series of conferences developed, in which scientists, especially physicists, attempted to work for peace, and tried to address urgent problems related to science. These conferences were called Pugwash Conferences on Science and World Affairs, taking their name from the small village in Nova Scotia where the first meeting was held. From the start, the main aim of the meetings was to reduce the danger that civilization would be destroyed in a thermonuclear war.

Many countries have local Pugwash groups, and the Danish National Pugwash Group is one of these. Our activities include conferences at the Danish Parliament, aimed at influencing decision-makers, but other activities are aimed at influencing public opinion. Peace education activities include the award of student peace prizes on United Nations Day.

United Nations Day Student Peace Prizes

In collaboration with the Danish Peace Academy, and with the help of the Hermod Lannung Foundation the Danish National Group of Pugwash Conferences on Science and World

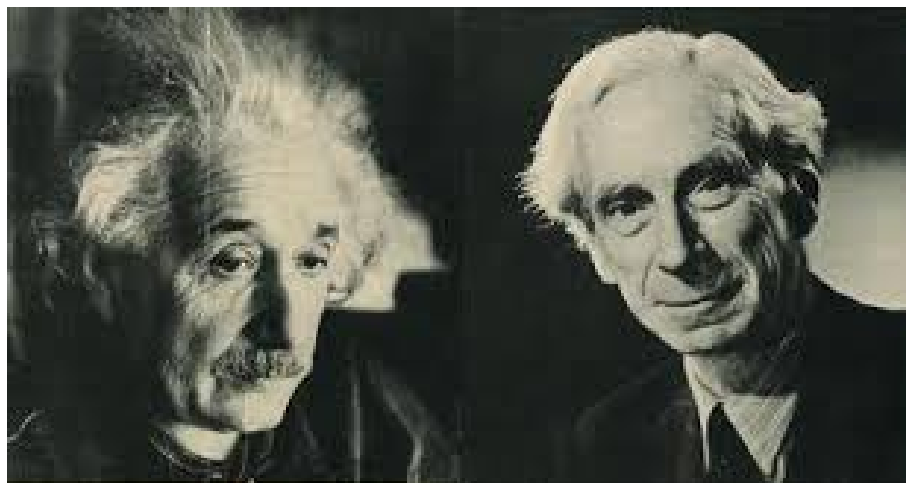


Figure 8.36: **The Russell-Einstein Manifesto: “Shall we put an end to the human race, or shall mankind renounce war?”** (Pugwash Conferences)

Affairs has offered prizes each year to students at 10 Danish gymnasiums for projects related to global problems and their solutions and to the United Nations.

These projects are essays, dramatic sketches, videos, websites, posters, etc., and they were judged on UN Day, before large audiences of students. The background for this project is as follows: In 2007, in collaboration with several other NGO's, we arranged a visit to Copenhagen by Dr. Tadatoshi Akiba, the Mayor of Hiroshima. In connection with his visit, we arranged a Peace Education Conference at the University of Copenhagen.

In connection with Dr. Akiba's visit, we also arranged a day of peace education at Copenhagen's Open Gymnasium. About 15 people from various branches of Denmark's peace movement arrived at the gymnasium at 7.00 a.m., and between 8.00 and 10.00 they talked to 15 groups of about 25-50 students about topics related to peace. At 10.30, all 500 students assembled in a large hall, where Dr. Akiba gave an address on abolition of nuclear weapons. A chorus from the gymnasium sang, and finally there was a panel discussion.

The students were extremely enthusiastic about the whole program. The success of our 2007 effort made us want to do something similar in 2008, and perhaps to broaden the scope. Therefore we wrote to the Minister of Education, and proposed that October 24, United Nations Day, should be a theme day in all Danish schools and gymnasiums, a day devoted to the discussion of global problems and their solutions. We received the very kind reply. The Minister said that he thought our idea was a good one, but that he did not have the power to dictate the curricula to schools. We needed to contact the individual schools, gymnasiums and municipalities.

In the autumn of 2008 we arranged a United Nations Day program on October 24 at Sankt Annæ Gymnasium with the cooperation of Nørre Gymnasium. We offered prizes to drama students at the two gymnasiums for the best peace-related dramatic sketch, a condition being that the sketches should be performed and judged before a large audience. Our judges were the famous actress Mia Luhne, Johan Olsen, the lead singer of a popular



Figure 8.37: **A painting representing the work of the United Nations. It won first prize at a UN Day Student Peace Prize competition.** (Danish National Pugwash Group)

rock group, and the dramatist Steen Haakon Hansen. The students' sketches and the judges speeches about the meaning of peace were very strong and moving. Everyone was very enthusiastic about the day. The judges have said that they would be willing to work with us again on peace-related cultural events.

Our successes in 2007 and 2008 have made us wish to continue and possibly expand the idea of making United Nations Day a theme day in Danish schools and gymnasiums, a day for discussion of global problems and their solutions, with special emphasis on the role of the United Nations. The Hermod Lannung Foundation supported our project for extending this idea to 10 Danish gymnasiums from 2010 until the present.

The Grundtvigian Peoples' Colleges

A unique feature of the Danish educational system is the adult education that is available at about a hundred Folkehøjskole (Peoples' Colleges). This tradition of adult education dates back to the Danish poet-bishop N.F.S. Grundtvig (1783-1872). Besides writing more than half of the hymns presently used in Danish churches, Grundtvig also introduced farmers' cooperatives into Denmark and founded a system of adult education.

At the time when Grundtvig lived, the Industrial Revolution had already transformed England into a country that exported manufactured goods but was unable to feed itself because of its large population. In this situation, Denmark began a prosperous trade, exporting high quality agricultural produce to England (for example dairy products, bacon,

and so on). Grundtvig realized that it would be to the advantage of small-scale Danish farmers to process and export these products themselves, thus avoiding losing a part of their profits to large land-owners or other middlemen who might do the processing and exporting for them. He organized the small farmers into cooperatives, and in order to give the farmers enough knowledge and confidence to run the cooperatives, Grundtvig created a system of adult education: the Peoples' Colleges. The cooperatives and the adult education system contributed strongly to making Denmark a prosperous and democratic country.

Of the hundred or so Grundtvigian Peoples' Colleges existing today, about forty offer peace education as a subject. An example of such a peace education course was the two-week summer school "Towards a Non-violent Society", held at the International College in Elsinore during the summer of 1985. Since it was supported not only by the students' fees but also by a government subsidy, the summer school was able to pay the travel and living expenses for lecturers who came from many parts of the world.

Among the stars of the summer school were former US Governor Harold Stassen, the only living person who had signed the UN Charter; the famous Cambridge University ethologist, Professor Robert Hinde; Professor Suman Khana from India, an expert on non-violence and Gandhi; Sister George, a Catholic nun from Jerusalem, who spoke 12 languages during the course of her daily work and who was an expert on the conflicts of the Middle East; and Meta Ditzel, a member of the Danish Parliament who advocated legislation to make excessively violent videos less easily available to children. Other lectures were given by representatives of Amnesty International and the Center for Rehabilitation of Torture Victims.

In discussing Danish peace education initiatives, we must not fail to mention Holger Terp's enormous and popular Danish Peace Academy website⁸. Despite serious health problems, which include almost complete loss of vision and multiple heart bypass operations, Holger Terp singlehandedly established a unique website devoted to peace education. The Danish Peace Academy website contains more than 99,000 files in Danish, English and German. The website is visited by many thousands of students from around the world.

The World Conference of Religions for Peace

Other powerful voices for peace have been raised by the World Conference of Religions for Peace, which met for the first time in October 1970 in Kyoto, Japan.⁹ At this meeting, more than 1000 religious leaders gathered to discuss the grave dangers posed by modern war. Among them were representatives of the Baha'i, Mahayana and Trevada Buddhists, Protestants, Roman Catholics, Orthodox Christians, Confucians, representatives of several streams of Hinduism, a number of communities of indigenous faith, Shiite and Sunni Muslims, Jains, Reform Jews, Shintos, Sikhs, Zoroastrians, and representatives of a number of new religions.

⁸www.fredsakademiet.dk

⁹Subsequent World Assemblies of the WCRP have been held in Louvain, Belgium, (1974); Princeton New Jersey, (1979); Nairobi, Kenya, (1984); Melbourne, Australia, (1989); Riva del Garde, Italy, (1994); and Amman, Jordan, (1999).

The WCRP sponsors many projects related to conflict resolution, the world's children, development, disarmament and security, human rights, and peace education. For example, in the field of peace education, WCRP sponsors a project in Israel called "Common Values/Different Sources" which brings together Jews, Muslims and Christians to study sacred texts together in search of shared values, eventually resulting in a book for classroom use. In England and Germany, another WCRP project analyzes school textbooks' treatment of religious traditions that are foreign to the books' intended audiences.

Dr. Edy Korthals Altes, a former Ambassador of the Netherlands to Poland and Spain and an Honorary President of the World Conference of Religions for Peace, has expressed his vision of our current global situation in the following words: "We need a new concept of security. The old concept dates back to the Romans who said 'If you want peace, prepare for war.' The new concept I would propose is exactly the opposite, 'If you want peace, prepare for peace.' While this may sound simplistic, it is difficult to put into practice since the application of justice and solidarity in international political and economic relations requires sacrifices from 'those who have.' I would give three reasons why the old concept of 'security' is no longer valid: a) The extreme vulnerability of modern society; b) The tremendous destructive power of modern arms and terrorism; c) The interdependence between nations. These three elements are closely interconnected. It is therefore imperative to apply justice and solidarity in our international relations. If not, disaster looms!"

Dr. Altes feels that economic reforms are needed if global peace is to be achieved. "Not only economic justice is involved", he writes, "but also political justice. A clear example of which is the current situation in the Middle East. There must also be justice in the economic world situation in which 1/5 of the world population enjoys a high standard of living while 1/5 lives in terrible poverty, millions dying every year from hunger. This 'North South gap' is increasing!"

Discussing "myths that underlie our present economic system", he points to

1. "The notion that each person has unlimited material needs. We are told to 'consume more' which is totally contrary to any religion. What is more, it is a self-defeating program that is contrary to humanity in general. The New Testament is clear 'you shall not live on bread alone.' Our deeper needs are not for material goods but for inner growth."
2. "Unlimited growth. The economy, my firm, my salary should all grow. In a finite planet, this is total nonsense. This maxim of growth has brought about great ecological damage."
3. Idolatry of the Free Market. I am in favor of a free market, but one that is set in the context of social and human conditions. We need to apply means to avoid the 'law of the jungle' in the market place."

No enumeration of religious voices raised in the cause of peace would be complete without mention of the Religious Society of Friends (Quakers), all of whom refuse to give any support whatever to the institution of war. Although they are fundamentally opposed to

war as being completely contrary to Christian ethics, the Quakers are active in caring for the victims of war, and in 1947 the American Friends Service Committee and the Friends Service Council were jointly awarded the Nobel Peace Prize.

The non-violence of Mahatma Gandhi, Martin Luther King and Nelson Mandela, the writings of the Dalai Lama, the messages of Pope John Paul II and other popes, the anti-war convictions of the Quakers, and the many projects of the World Conference of Religions for Peace all illustrate the potentialities of the world's religions as powerful forces for mobilizing public opinion in the cause of peace. One hopes that the voice of religion in this cause will become still more powerful in the future. Each week, all over the world, congregations assemble and are addressed by their leaders on ethical issues. But all too often there is no mention of the astonishing and shameful contradiction between the institution of war (especially the doctrine of "massive retaliation"), and the principle of universal human brotherhood, loving and forgiving one's enemies, and returning good for evil. At a moment of history when the continued survival of civilization is in doubt because of the incompatibility of war with the existence of thermonuclear weapons, our religious leaders ought to use their enormous influence to help to solve the problem of war, which is after all an ethical problem. In this way, religion can become part of the cure of a mortal social illness rather than part of the disease - part of the answer rather than of part of the problem.

The Hiroshima Peace Committee and the last remaining hibakushas

In Japanese the survivors of injuries from the nuclear bombing of Hiroshima and Nagasaki are called "hibakushas". Over the years, the Soka Gakkai Hiroshima Peace Committee has published many books containing their testimonies. The most recent of these books, "A Silence Broken", contains the testimonies of 14 men, now all in their late 70's or in their 80's, who are among the last few remaining hibakushas. All 14 of these men have kept silent until now because of the prejudices against hibakushas in Japan, where they and their children are thought to be unsuitable as marriage partners because of the effects of radiation. But now, for various reasons, they have chosen to break their silence. Many have chosen to speak now because of the Fukushima disaster.

The testimonies of the hibakushas give a vivid picture of the hell-like horrors of the nuclear attack on the civilian population of Hiroshima, both in the short term and in the long term. For example, Shigeru Nonoyama, who was 15 at the time of the attack, says: "People crawling out from crumbled houses started to flee. We decided to escape to a safe place on the hill. We saw people with melted ears stuck to their cheeks, chins glued to their shoulders, heads facing in awkward positions, arms stuck to bodies, five fingers joined together and grab nothing. Those were the people fleeing. Not merely a hundred or two, The whole town was in chaos."

"I saw the noodle shop's wife leg was caught under a fallen pole, and a fire was approaching. She was screaming, 'Help me!Help me!' There were no soldiers, no firefighters. I later heard that her husband had cut off his wife's leg with a hatchet to save her."

"Each and every scene was hell itself. I couldn't tell the difference between the men and

the women. Everybody had scorched hair, burned hair, and terrible burns. I thought I saw a doll floating in a fire cistern, but it was a baby. A wife trapped under her fallen house was crying, 'Dear, please help me, help me!' Her husband had no choice but to leave her in tears."

The Catholic Church

An outstanding example of religious leadership in addressing global problems was given by H.H. Pope John Paul II. In his Christmas address on 25 December, 2002, the Pope said that efforts for peace were urgently needed "in the Middle East, to extinguish the ominous smouldering of a conflict which, with the joint efforts of all, can be avoided."

Pope John Paul II was not an exception among the Roman Catholic Popes of the 20th century. All of them have spoken strongly against the institution of war. Especially notable are H.H. Pope Paul IV who made a one-day visit to the United Nations where his speech included the words "no more war, war never again", and H.H. Pope John XXIII, author of the eloquent encyclical, *Pacem in Terris*. One can think also of the Ecumenical Council Vatican II, which denounced the arms race as an "utterly treacherous trap for humanity", questioned the method of deterrence as a safe way to preserve a steady peace, and condemned war as a "crime against God and man himself".

In his Apostolic Exhortation, "Evangelii Gaudium", Pope Francis said: "In our time humanity is experiencing a turning-point in its history, as we can see from the advances being made in so many fields. We can only praise the steps being taken to improve people's welfare in areas such as health care, education and communications. At the same time we have to remember that the majority of our contemporaries are barely living from day to day, with dire consequences. A number of diseases are spreading. The hearts of many people are gripped by fear and desperation, even in the so-called rich countries. The joy of living frequently fades, lack of respect for others and violence are on the rise, and inequality is increasingly evident. It is a struggle to live and, often, to live with precious little dignity."

"This epochal change has been set in motion by the enormous qualitative, quantitative, rapid and cumulative advances occurring in the sciences and in technology, and by their instant application in different areas of nature and of life. We are in an age of knowledge and information, which has led to new and often anonymous kinds of power."

"Just as the commandment 'Thou shalt not kill' sets a clear limit in order to safeguard the value of human life, today we also have to say 'thou shalt not' to an economy of exclusion and inequality. Such an economy kills. How can it be that it is not a news item when an elderly homeless person dies of exposure, but it is news when the stock market loses two points? This is a case of exclusion. Can we continue to stand by when food is thrown away while people are starving? This is a case of inequality. Today everything comes under the laws of competition and the survival of the fittest, where the powerful feed upon the powerless. As a consequence, masses of people find themselves excluded and marginalized: without work, without possibilities, without any means of escape."

"In this context, some people continue to defend trickle-down theories which assume that economic growth, encouraged by a free market, will inevitably succeed in bringing about

greater justice and inclusiveness in the world. This opinion, which has never been confirmed by the facts, expresses a crude and naive trust in the goodness of those wielding economic power and in the sacralized workings of the prevailing economic system. Meanwhile, the excluded are still waiting.”

The Dalai Lama

In his excellent and highly readable book, *Ancient Wisdom, Modern World: Ethics for the New Millennium*, the Dalai Lama writes: “..At present and for the conceivable future, the UN is the only global institution capable of influencing and formulating policy on behalf of the international community. Of course, many people criticize it on the grounds that it is ineffective, and it is true that time and again we have seen its resolutions ignored, abandoned and forgotten. Nevertheless, in spite of its shortcomings, I for one continue to have the highest regard not only for the principles on which it was founded but also for the great deal that it has achieved since its inception in 1945. We need only ask ourselves whether or not it has helped to save lives by defusing potentially dangerous situations to see that it is more than the toothless bureaucracy some people say it is. We should also consider the great work of its subsidiary organizations, such as UNICEF, United Nations High Commission for Refugees, UNESCO and the World Health Organization...”

“I see the UN, developed to its full potential, as being the proper vehicle for carrying out the wishes of humanity as a whole. As yet it is not able to do this very effectively, but we are only just beginning to see the emergence of a global consciousness (which is made possible by the communications revolution). And in spite of tremendous difficulties, we have seen it in action in numerous parts of the world, even though at the moment there may be only one or two nations spearheading these initiatives. The fact that they are seeking the legitimacy conferred by a United Nations mandate suggests a felt need for justification through collective approbation. This, in turn, I believe to be indicative of a growing sense of a single, mutually dependent, human community.”

Unfulfilled responsibilities of the mainstream media

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 in general their role is not only unhelpful - it is often negative. War and conflict are blatantly advertised by television and newspapers. Meanwhile the peace movement has almost no access to the mainstream media.

Today we are faced with the task of creating a new global ethic in which loyalty to family, religion and nation will be supplemented by a higher loyalty to humanity as a whole. In case of conflicts, loyalty to humanity as a whole must take precedence. In addition, our present culture of violence must be replaced by a culture of peace. To achieve these essential goals, we urgently need the cooperation of the mass media.

The predicament of humanity today has been called “a race between education and catastrophe”: Human emotions have not changed much during the last 40,000 years, and human nature still contains an element of tribalism to which nationalistic politicians successfully appeal. The completely sovereign nation-state is still the basis of our global political system. The danger in this situation is due to the fact that modern science has given us incredibly destructive weapons. Because of these weapons, the tribal tendencies in human nature and the politically fragmented structure of our world have both become dangerous anachronisms.

After the tragedies of Hiroshima and Nagasaki, Albert Einstein said, “The unleashed power of the atom has changed everything except our way of thinking, and thus we drift towards unparalleled catastrophes.” We have to learn to think in a new way. Will we learn this in time to prevent disaster? When we consider the almost miraculous power of our modern electronic media, we can be optimistic. Cannot our marvelous global communication network be used to change anachronistic ways of thought and anachronistic social and political institutions in time, so that the system will not self-destruct as science and technology revolutionize our world? If they were properly used, our instantaneous global communications could give us hope.

The success of our species is built on cultural evolution, the central element of which is cooperation. Thus human nature has two sides, tribal emotions are present, but they are balanced by the human genius for cooperation. The case of Scandinavia - once war-torn, now cooperative - shows that education is able to bring out either the kind and cooperative side of human nature, or the xenophobic and violent side. Which of these shall it be? It is up to our educational systems to decide, and the mass media are an extremely important part of education. Hence the great responsibility that is now in the hands of the media.

How do the media fulfill 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 need for strengthening the United Nations, and the ways that it could be strengthened? 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 the military-industrial complex and other powerful lobbys. Do they present us with the need for a just system of international law that acts on individuals? On the whole, the subject is neglected. Do they tell of the essentially genocidal nature of nuclear weapons, and the need for their complete abolition? 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 35 or 45 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 and environmental catastrophes. 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 hang 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.

The alternative media

Luckily, there are alternatives to the mainstream media, available primarily on the Internet, but also to a certain extent on radio and television and in films. One can think of such alternative media figures as Thom Hartmann, Leonardo DiCaprio, Amy Goodman and Oliver Stone, or Internet sites such as Common Dreams, EcoWatch, Truthout, Countercurrents, the Danish Peace Academy website and TMS Weekly Digest. Interestingly, Bob Dylan, a longtime counterculture hero, has recently been awarded the Nobel Prize in Literature.

Johan Galtung

One of the founders of Peace Studies and Conflict Resolution as academic disciplines, is Professor Johan Galtung (1930 -). He is the author of more than a thousand articles and over a hundred books in these fields. He was also the main founder of the Peace Research Institute Oslo in 1959, and he served as its first director until 1970. Prof. Galtung established the *Journal of Peace Research* in 1964. A few years later, in 1969, he was appointed to the world's first chair in peace and conflict studies at the University of Oslo. Dr. Jan Øberg, a student of Prof. Galtung, went on to found the influential Transnational Foundation for Peace and Future Research in Lund, Sweden.

Universities Offering Peace Studies Degrees

Among the American universities and colleges offering degrees in Peace Studies and Conflict Resolution¹⁰, one can mention the University of Notre Dame, the University of California, Berkeley, Georgetown University, Swarthmore College, Tufts University, Wellesley College, the University of North Carolina at Chapel Hill, Colgate University, Brandeis University, the University of Texas at Austin, George Washington University, DePauw University, Smith College, Syracuse University, Southern Methodist University, Saint Johns University, American University, Marquette University, College of Saint Benedict, University of San Diego, Creighton University, Willamette University, University of Denver, Duquesne

¹⁰<http://colleges.startclass.com/d/o/Peace-Studies-and-Conflict-Resolution>

University, John Carroll University, Earlham College, George Mason University, Juniata College, University of Utah and Manhattan College. A degree program in Peace Studies is also offered by Clark University¹¹.

In Costa Rica, the University for Peace (UPEACE)¹² offers a wide variety of courses. The departments of UPEACE include Environment and Development, International Law and Human Rights, and Peace and Conflict Studies. UPEACE also offers online education¹³.

The many educational institutions founded by Soka Gakkai International offer courses in peace studies. Among these are Soka University Japan, the Toda Institute for Global Peace, and Soka University of America.

Masters courses in peace studies and conflict resolution¹⁴ are also offered at Universitat Oberta de Catalunya, University of Malta, Durham University, Trinity College Dublin, Alice Salomon University of Applied Sciences Berlin, University of Nicosia, Australian National University, Middlebury Institute of International Studies at Monterey, Swansea University, Aarhus University, Utrecht University, University of Kent, CIFE, University of Technology Sydney, University of Bridgeport, Duquesne University, SOAS University of London, Chapman University, SIT Graduate Institute, Kings College London, Goethe University Frankfurt, Joan B. Kroc School of Peace Studies, Johns Hopkins University School of Advanced International Studies, University of Bradford Faculty of Social and International Studies, and University of East Anglia Faculty of Social Sciences.

Jakob von Uexküll and The World Future Council

Jakob von Uexküll belongs to a brilliant family. His grandfather was a famous Baltic-German physiologist who founded the discipline of Biosemiotics. Besides being a former Member of the European Parliament and a leader of the German Green Party, von Uexküll himself founded both the Right Livelihood Award (sometimes called the Alternative Nobel Prize) and also the World Future Council.¹⁵

8.17 A few outstanding voices

The greatest threats facing the world today are catastrophic climate change and thermonuclear war, but a large-scale global famine also has to be considered.

We give our children loving care, but it makes no sense to do so and at the same time to neglect to do all that is within our power to ensure that they and their descendants will

¹¹<https://www2.clarku.edu/departments/peacestudies/gradprograms.cfm>

¹²<https://www.upeace.org/academic/academic-departments/peace-and-conflict-studies/peace-education>

¹³<http://www.elearning.upeace.org/>

¹⁴<http://www.masterstudies.com/Masters-Degree/Political-Science/Peace-and-Conflict-Studies/>

¹⁵<http://www.rightlivelihood.org/>
<http://www.worldfuturecouncil.org/>
<http://www.worldfuturecouncil.org/gpact/>

inherit an earth in which they can survive. We also have a responsibility to all the other living organisms with which we share the gift of life.

Inaction is not an option. We have to act with courage and dedication, even if the odds are against success, because the stakes are so high.

The mass media could mobilize us to action, but they have failed in their duty.

Our educational system could also wake us up and make us act, but it too has failed us. The battle to save the earth from human greed and folly has to be fought in the alternative media.

It is impossible to list all of the many thousands of brave, dedicated and eloquent people who write for the alternative media, or the equally brave and dedicated editors who publish these articles. But here are pictures of a few famous names that come to mind:



Figure 8.38: The Norwegian mathematician and sociologist Johan Galtung (born 1930), pioneer of the discipline Conflict Resolution. He also founded the Peace Research Institute, Oslo and the Journal of Peace Research. He has published over 1000 articles and more than 100 books.



Figure 8.39: Jan Øberg (born 1951), co-founder and Director of the Transnational Foundation for Peace and Future Research, and editor of *The Transnational*. Born in Denmark, Dr. Øberg was formerly the leader of the Lund Peace Research Institute.



Figure 8.40: Mrs. Fumiko Galtung, Transcend Media Service Weekly Digest editor Antonio C.S. Rosa, and Johan Galtung in Norway, 2007.



Figure 8.41: Binu Mathew is the heroic and dedicated editor of the Internet journal “Countercurrents”. He lives in the Kerala Province of India, which has recently been hit by enormous floods, despite which he continues to publish his vitally important journal every day.



Figure 8.42: John Pilger (born in Australia in 1939). His outstanding documentary films on global problems have won a BAFTA award. He is a critic of American, British and Australian foreign policy, which he considers to be driven by an imperialist agenda.



Figure 8.43: The American film maker Oliver Stone (born 1946) has won three Academy Awards for his work, and he has been nominated for very many other Oscars. His Vietnam War trilogy “Platoon”, “Born on the Fourth of July”, and “Heaven and Earth” have won critical acclaim, as have his films “Salvador”, “Wall Street”, “Money Never Sleeps”, “JFK”, “Nixon”, “W”, and “Snowdon”.



Figure 8.44: Born in 1957. Amy Goodman co-founded Democracy Now: The War and Peace Report in 1996. She credits the great success of the program, broadcast on radio, television and the Internet, with the deficiencies of the mainstream media which leave a huge niche for alternative reporting. Amy Goodman has received dozens of awards for her work, including the Right Livelihood Award, sometimes called “The Alternative Nobel Prize”, and the Gandhi Peace Award for making “a significant contribution to the promotion of an enduring international peace”.



Figure 8.45: Thom Hartmann (born in 1951) is the host of the daily radio and television show “The Big Picture”. As a writer, he has published more than twenty books. His book “Last Hours of Ancient Sunlight” inspired Leonardo DiCaprio’s documentary “Before the Flood”. Together with the DiCaprio family, Hartmann helped to produce an important short video “Last Hours”, which is available at <https://www.youtube.com/watch?v=2bRrg96UtMc> . The video discusses the mass extinctions that can be observed in the geological record, and warns that anthropogenic climate change might cause an extinction comparable to the largest one, the Permian-Triassic event, by initiating a methane hydrate feedback loop.



Figure 8.46: Born in 1928, Institute Professor Emeritus Noam Chomsky of MIT and the University of Arizona is considered to be one of the greatest public intellectuals in the world. As a linguist and cognitive scientist, he revolutionized our ideas of the inherited universal grammar of humans. He is also a philosopher and historian, and has written more than 100 important books, many of which criticize the mass media and US government policies. Professor Chomsky has stated that because of its climate change denial, the US Republican Party is the most dangerous organization in history, since its actions may lead to catastrophic climate change and perhaps the extinction of the human species.



Figure 8.47: Pulitzer Prize winning author Chris Hedges (born in 1956) worked for 15 years as a foreign correspondent for the New York Times, before resigning in 2005. He is the author of many important anti-war and anti-fascist books, including “War is a Force That Gives Us Meaning” (2002), “Empire of Illusion: The End of Literacy and the Triumph of Spectacle” (2009), “Death of the Liberal Class” (2010), “Days of Destruction, Days of Revolt” (2012), “Wages of Rebellion: The Moral Imperative of Revolt” (2015) and “America. The Farewell Tour” (2018). In a 2013 interview, Hedges said that “the left has been destroyed, especially the radical left, quite consciously in the whole name of anti-communism”, and “we have allowed ourselves to embrace an ideology which, at its core, states that all governance is about maximizing corporate profit at the expense of the citizenry. For what do we have structures of government, for what do we have institutions of state, if not to hold up all the citizenry, and especially the most vulnerable?”.



Figure 8.48: Award-winning author Naomi Klein was born in 1970 into a Canadian family of prominent peace activists. As a teenager, she felt embarrassed by her family's politics, and she reacted by becoming a mall-junkie, addicted to consumerism. Later, however, she became (in her own words) "less of a brat", and she wholeheartedly adopted her family's reformist traditions. Her first book, "No Logo: Taking Aim at the Brand Bullies" was published in 1999, shortly after the Seattle WTO protests, and it quickly became a highly-influential best-seller. Her famous book "The Shock Doctrine" (2007) argues that neoliberal politicians take advantage of disasters, when the public demands quick action, to ram through whatever changes they wish, and these are accepted uncritically by the change-demanding public, although they may have nothing to do with correcting the disaster. In another deservedly-famous book, "This Changes Everything" (2014), Naomi Klein addresses the twin threats of catastrophic climate change and thermonuclear war. She argues that environmental activists and peace activists ought to join hands and work together for system change. Partly as a result of her book, the slogan "System change not climate change!" was adopted by protest marchers both in New York and Paris.



Figure 8.49: The extremely distinguished scholar and author Professor Richard Falk was born in 1930, and is still very active today. He is the author of more than 20 books on international law and editor or co-editor of 20 others.

8.18 The Eqbal Ahmed Centre For Public Education

This centre for public education (EACPE) can be reached on the link <http://eacpe.org/> . It was established by the distinguished theoretical physicist Pervez Hoodbhoy and others, and it takes its name from the courageous writer, university professor and activist Eqbal Ahmed.

An article by S.M. Tatar in the Friday Times¹⁶ states that “The late Eqbal Ahmad was an internationally known and respected Pakistani political scientist, intellectual, scholar and teacher who returned to Islamabad in the 1990’s with a dream. He wanted to build Khaldunia University. Khaldunia could have been a game-changer in Pakistan’s higher education system. Eqbal Ahmad taught at various US universities and was a key political voice in international affairs. He enjoyed the friendship and respect of the likes of Edward Said and Noam Chomsky - who admired his work, his independent thinking and his identification with the causes of oppressed peoples.

“Ahmad was an intellectual with roots in Pakistan, influencing thinking on major world events like the Vietnam war, Algeria’s war of independence and the Palestinian tragedy. He was fully committed to his vision. He was not a desk scholar. He was part of the Algerian liberation movement in the 1960’s and an active opponent of the Vietnam war. Along with others, he was charged with being part of a plot to kidnap Henry Kissinger, in an effort to end the Vietnam war. And he advised the the PLO leadership in Palestine!”

The Eqbal Ahmed Centre for Public Education states that “Knowledge translated into action is the most potent and powerful game-changer known to man. The wedding of com-

¹⁶<https://www.thefridaytimes.com/tft/a-dream-rudely-shattered/>

puters and telecommunications enables the transportation of ideas, the sharing of knowledge and the promotion of learning on a scale and with a speed that is near miraculous.

“The Eqbal Ahmad Centre for Public Education honours the life and work of Dr. Eqbal Ahmad, a Pakistani academic, social scientist, writer, public intellectual and activist. The Centre’s web site of the same name is a rich mother lode of enlightening content for those who thirst for knowledge. They also keep adding to the content frequently, so the site is always worth a visit.

“We believe the site is a great resource for students as well. Some their content is directed at science students, particularly students of the physical sciences and mathematics. This particular section is rich in video content, and is certain to be helpful in acquiring a solid grounding in the subjects. Apart from such video lectures, there is also a great wealth of video material for those who wish to enhance their knowledge of scientific subjects in general.”



Figure 8.50: **Professor Eqbal Ahmed (1933-1999).**



Figure 8.51: Professor Pervez Hoodbhoy (born in 1950) is Zohra and Z.Z. Ahmad Distinguished Professor of Physics and Mathematics at Forman Christian College, Lahore. In 2013, he was made a member of the UN Secretary General's Advisory Board on Disarmament. Among the awards he has won are the IEEE Baker Award for Electronics (1968); the Abdus Salam Prize for Mathematics (1984); the UNESCO Kalinga Prize for the popularization of science (2003); the Joseph A. Burton Award (2010) from the American Physical Society and the Jean Meyer Award from Tufts University. In 2011, he was included in the list of 100 most influential global thinkers by Foreign Policy magazine. As the head of Mashal Books in Lahore, Prof. Hoodbhoy leads a major translation effort to produce books in Urdu that promote modern thought, human rights, and emancipation of women.

8.19 The Danish Peace Academy

The Danish Peace Academy is an organization that was founded by Holger Terp. Holger completed his education as a librarian in 1992. In 1996, he participated in a course on “Internet and Presentation Technique” at the Academy of Fine Arts in Copenhagen. However, in 1999 he suffered a stroke, which made him blind in one eye and almost blind in the other. The stroke also affected Holger’s speech, so that it was difficult to understand him when he talked. Instead of giving up, as many people would have done, Holger resolved to devote the remainder his life to the cause of world peace. Despite his severe handicap, he has achieved almost incredible results.

Holger’s greatest achievement has been to found the Danish Peace Academy and to single-handedly create its enormous website. The website contains more than 90,000 files related to peace, in Danish, English and German, and it is currently visited by approximately 4,000 different people each day. Many of the visitors are from schools and universities in various parts of the world, who use the information on the website as a part of their studies.

In creating his website, Holger has used both his training as a librarian and the knowledge that he gained from the 1996 course at Copenhagen’s Academy of Fine Arts. As a result, many parts of the website have great visual beauty because of the liberal use of images. For example, one can enjoy Holger’s “Greenham Common Songbook”, which is an account of the successful efforts of the woman’s peace movement in England to prevent common land at Greenham from being used as a base for nuclear weapons. The songbook is a piece of history, illustrated not only by the songs, which the visitor to the website can hear performed by such artists as Peggy Seeger, but also by countless beautiful posters and photos from the era. Other special features of the website are numerous books, articles, poetry and song collections, a peace-related encyclopedia, and a timeline showing the history of the peace movement, from the middle ages up to the present.

Holger himself is the author or editor of numerous books, and he has translated Gandhi’s autobiography into Danish. The example of Gandhi’s life has always been a guide for Holger, and perhaps Holger’s life can be a guide for our own efforts, as we strive to work for peace. If he could achieve so much with such a severe handicap, then the rest of us ought to be able to do something too.

Here are some quotations from the forward to Holger’s autobiography. It is written in Danish, but I have made an approximate translation:

Militarism and the Military Industrial Complex have proved to be too big a mouthful for the peace movement, despite the fact that militarism has always been the main contributor to pollution and climate change. Ever since the First World War, military activities have been the largest users of fossil fuels.

Let’s consider a nice little war somewhere. Besides the human and other biological costs, cities are ruined, as well as the country’s administration and infrastructure. The gross national product collapses down to a tiny fraction of what it had been before the war. Military hardware is destroyed in war, and the environment is polluted with poisonous



Figure 8.52: Holger Terp receives an award for his life-long efforts for world peace.

byproducts of its degradation, such as heavy metals. This has always been the case with war. Furthermore, wars do not turn out as the politicians and war departments plan. Wars are unpredictable. Militarists make at least as many mistakes as the rest of us.

Therefore it cannot surprise even the most ignorant politician that war is primarily about resources and economy. The empty places in arsenals need to be refilled after a war. Governments buy from private weapons manufacturers, and a new war starts somewhere in a distant country whose policies have not given us unlimited access to cheap resources; and the mills of disaster begin to roll again, since weapon production is both resource-swallowing and environment-destroying. The more powerful weapons are, the more environmentally destructive they are, both when they are ,manufactured and when they are used....

It seems strange to me that religious fundamentalists can read in the Old Testament the commandment: "Thou shalt not kill". In other words, killing is both a sin and a crime; also when the killing is organized by governments. But soldiers do exactly the opposite of what religion requires. They go to war and kill. They do so because politicians are manipulated by the merchants of death. the arms manufacturers. One has to admire the war party's propaganda-machine. It is amazingly effective, with the result that the weapon industry's profits have grown enormously ever since the Iraq War of 2003. Soldiers and civilians are traumatized by war. Not so the politicians who start the wars, and certainly not the weapons manufacturers.

Suggestions for further reading

1. Craraft, James. *Two Shining Souls: Jane Addams, Leo Tolstoy, and the Quest for Global Peace* (Lanham: Lexington, 2012). 179 pp.
2. Lednicki, Waclaw (April 1947). *Tolstoy through American eyes*. The Slavonic and East European Review. 25 (65).
3. Leon, Derrick (1944). *Tolstoy His Life and Work*. London: Routledge.
4. *Trotsky's 1908 tribute to Leo Tolstoy* Published by the International Committee of the Fourth International (ICFI).
5. *The Life of Tolstoy: Later years* by Aylmer Maude, Dodd, Mead and Company, 1911 at Internet Archive
6. *Why we fail as Christians* by Robert Hunter, The Macmillan Company, 1919 at Google Books
7. Abel M (2005). *Glimpses of Indian National Movement*. ICFAI Books.
8. Andrews, C. F. (2008) [1930]. *Mahatma Gandhi's Ideas Including Selections from His Writings*. Pierides Press.
9. Dalton, Dennis, ed. (1996). *Mahatma Gandhi: Selected Political Writings*. Hackett Publishing.
10. Duncan, Ronald, ed. (2011). *Selected Writings of Mahatma Gandhi*. Literary Licensing, LLC.
11. Gandhi, M. K.; Fischer, Louis (2002). Louis Fischer (ed.). *The Essential Gandhi: An Anthology of His Writings on His Life, Work and Ideas*. Vintage Books.
12. Gandhi, Mohandas Karamchand (1928). *Satyagraha in South Africa (in Gujarati) (1 ed.)*. Ahmedabad: Navajivan Publishing House. Translated by Valji G. Desai.
13. Gandhi, Mohandas Karamchand (1994). *The Collected Works of Mahatma Gandhi*. Publications Division, Ministry of Information and Broadcasting, Govt. of India.
14. Gandhi, Mohandas Karamchand (1990), Desai, Mahadev H. (ed.), *Autobiography: The Story of My Experiments With Truth*, Mineola, N.Y.: Dover,
15. Gandhi, Rajmohan (2007). *Mohandas: True Story of a Man, His People*. Penguin Books Limited.
16. Guha, Ramachandra (2013). *Gandhi Before India*. Penguin Books Limited. ISBN 978-93-5118-322-8.
17. Jack, Homer A., ed. (1994). *The Gandhi Reader: A Source Book of His Life and Writings*. Grove Press.
18. Johnson, Richard L. & Gandhi, M. K. (2006). *Gandhi's Experiments With Truth: Essential Writings by and about Mahatma Gandhi*. Lexington Books.
19. Todd, Anne M. (2009). *Mohandas Gandhi*. Infobase Publishing.
20. Parel, Anthony J., ed. (2009). *Gandhi: "Hind Swaraj" and Other Writings Centenary Edition*. Cambridge University Press.
21. Ayton, Mel (2005). *A Racial Crime: James Earl Ray and the Murder of Martin Luther King Jr.* Archebooks Publishing.

22. Branch, Taylor (1988). *Parting the Waters: America in the King Years, 1954-1963*. Simon & Schuster.
23. Branch, Taylor (1998). *Pillar of Fire: America in the King Years, 1963-1965*. Simon & Schuster.
24. King, Coretta Scott (1993) [1969]. *My Life with Martin Luther King, Jr.* Henry Holth & Co.
25. King, Martin Luther Jr. (2015). West, Cornel (ed.). *The Radical King*. Beacon Press.
26. King, Martin Luther Jr. (1986), *Testament of Hope. The essential writings and speeches of Martin Luther King, Jr.* (San Francisco: Harper & Row), edited by J. M. Washington; reissued by Harper in 1992 as *I Have a Dream: Writings and Speeches That Changed the World*.
27. Kirk, John A., ed. (2007). *Martin Luther King Jr. and the Civil Rights Movement: Controversies and Debates*. pp. 224.
28. Schulke, Flip; McPhee, Penelope (1986). *King Remembered*, Foreword by Jesse Jackson.
29. Waldschmidt-Nelson, Britta (2012). *Dreams and Nightmares: Martin Luther King Jr. Malcolm X, and the Struggle for Black Equality*. Gainesville, FL: University Press of Florida.

Chapter 9

THE “WAR AGAINST TERROR”

9.1 Perpetual war

The military-industrial complex needs enemies. Without them it would wither. Thus at the end of the Second World War, this vast power complex was faced with a crisis, but it was saved by the discovery of a new enemy: communism. However, at the end of the Cold War there was another terrible crisis for the military establishment, the arms manufacturers and their supporters in research, government and the mass media. People spoke of the “peace dividend”, i.e., constructive use of the trillion dollars that the world wastes each year on armaments. However, just in time, the military-industrial complex was saved from the nightmare of the “peace dividend” by the September 11 attacks on New York and Washington.

No matter that the attacks were crimes committed by individuals rather than acts of war, crimes against which police action rather than military action would have been appropriate. The Bush Administration (and CNN, Fox, etc.) quickly proclaimed that a state of war existed, and that the rules of war were in effect. The Cold War was replaced with the “War on Terrorism”.

To a large extent, this over-reaction to the events of 9/11/2001 can be interpreted in terms of the needs of the military-industrial complex against which Eisenhower had warned. Without a state of war and without enemies, this vast conglomerate of organizations and pressure groups would have languished.

If the aim of the “War on Terror” had been to rid the world of the threat of terrorism, acts like illegal assassination using drones would have been counterproductive, since they create many more terrorists than they destroy. But since the real aim is to produce a state of perpetual war, thus increasing the profits of the military-industrial complex, such methods are the best imaginable. Urinating on Afghan corpses or burning the Koran or murderous night-time raids on civilian homes also help to promote the real goal: perpetual war.

Even the events that initiated the “War on Terror”, seem to have been made worse than they otherwise might have been, in order to give a better excuse for invading Iraq, attacking

Afghanistan, and attacking civil liberties. There is evidence that a number of highly placed officials in the US government knew as early as April 2001 that the World Trade Center might soon be attacked. The testimony given by CIA insider Susan Lindauer is very explicit about this point. There is also evidence that charges of thermite were placed on the steel structures of several buildings, to melt the steel and thus ensure collapse. Molten steel and traces of thermite were found in the ruins before these were sealed off from public scrutiny by the FBI.

The collapse of Building 7 (which was not hit by any aircraft) is particularly suspicious. Larry Silverstein, the leaseholder of the World Trade Center, said shortly afterwards in a PBS interview: "I remember getting a call from the fire department commander telling me that they were not sure that they would be able to contain the fire..." (and he said that) "I think that the smartest thing to do is to pull it." The phrase "pull it" is one used to speak of controlled demolition, and the subsequent free-falling collapse of Building 7 had all the earmarks of this process.

Architects and Engineers for 9/11 Truth, an organization of more than a thousand accredited architects and engineers, have produced a two hour documentary film pointing to evidence that the collapse of the World Trade Center buildings was due to explosive charges of thermite rather than to fire or the impact of airplanes ¹

For those who belong to the military-industrial complex, perpetual war is a blessing, but for the majority of the people of the world it is a curse. Since we who oppose war are the vast majority, can we not make our wills felt?

9.2 Are we being driven like cattle?

As we stand in line for security checks at airports, we may have the distinct feeling that we are being herded like cattle. Air travel has changed, and has become much less pleasant, since the fear of terrorism replaced the fear of communism as the excuse that governments give for diverting colossal sums of money from desperately needed social goals into the bottomless pit of war. Innocent grandmothers, and their grandchildren, are required to remove their shoes and belts. Everyone is treated like a criminal. It is a humiliating experience. We may well feel like dumb driven cattle; and the purpose of the charade is not so much to prevent airliners from being sabotaged as it is to keep the idea of terrorism fresh in our minds.

Is the threat of terrorism real? Or is it like the barking of a dog driving a herd? The threat of climate change is very real indeed. The threat to future global food security is real too. Already 11 million children die every year from malnutrition and poverty-related causes. The threat to human civilization and the biosphere posed by a possible Third World War is real. The threat of exhaustion of non-renewable resources and economic collapse is real. The dangers associated with our unstable fractional reserve banking system are also real. Beside these all too real threats to our future, the threat of terrorism is negligible.

¹<https://topdocumentaryfilms.com/911-explosive-evidence-experts-speak-out/>



Figure 9.1: **Passengers waiting to be examined before boarding their flights.**

Millions starve. Millions die yearly from preventable diseases. Millions die as a consequence of wars. Compared with these numbers, the total count of terrorist victims is vanishingly small. It is even invisible compared with the number of people killed yearly in automobile accidents.

Terrorism is an invented threat. Our military industrial complex invented it to take the place of the threat of communism after the end of the Cold War. They invented it so that they would be able to continue spending 1,700,000,000,000 dollars each year on armaments, an amount almost too large to be imagined.

So the people, the driven cattle, have been made to fear terrorism. How was this done? It was easy after 9/11. Could it be that the purpose of the 9/11 disaster was to make people fear terrorism, so that they could be more easily manipulated, more easily deprived of their civil rights, more easily driven into a war against Iraq? There is strong evidence that many highly placed governmental figures knew well in advanced that the World Trade Center would be attacked, and that they made the disaster much worse than it otherwise would have been. This evidence is available on the Internet. ²

²<http://www.transcend.org/tms/2013/12/911-explosive-evidence-experts-speak-out/>
<https://www.youtube.com/watch?v=7OE3Adu4l0g>
<http://www.youtube.com/watch?v=e-wXcJA-et0>



Figure 9.2: Are we being driven like cattle? Is the true purpose of excessive security checks to make people believe that terrorism is a major danger?





Figure 9.3: Building 7 was not hit by any airplane. Suddenly, six hours after the collapse twin towers, it collapsed in what experts have testified to be a classic example of controlled demolition.



Figure 9.4: Molten steel pouring from one of the twin towers before its collapse.



Figure 9.5: The heat of an ordinary fire is far below the temperature needed to melt steel.

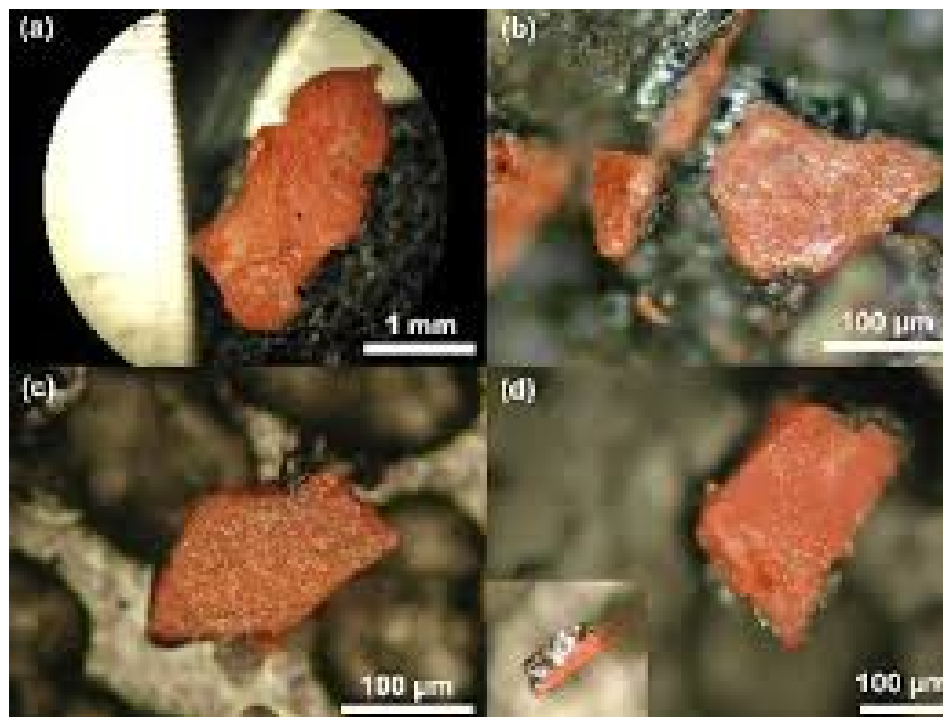


Figure 9.6: Many samples of dust were collected after the collapse of the World Trade Center buildings. In all of these samples, traces of nanothermite were found. Nanothermite is compound that produces intense heat when it is burned, and it can be used for melting steel.

9.3 Media exaggeration of attacks in Paris

For more than a week after the terrorist attacks in Paris on 13 November, 2015, every television news program of any kind was completely dominated by non-stop day-and-night coverage of the “breaking news”. The attacks, in which 130 people were killed and 80-99 seriously injured, were presented by our mass media with such a concentration of hysteria that they blotted out every other type of news from the public consciousness. The rather small number of people killed or injured by the attackers did not seem to matter. Our corporate-controlled mass media succeeded in robbing us of our sense of proportion.

With the extremely important Climate Conference COP21 starting in the same city, Paris, on 30 November, we urgently need to regain our lost sense of proportion. Is terrorism a great danger to human civilization and the biosphere? Or is it something very small, that has been blow up to a completely disproportionate size by our perfidious mass media in order to sell wars, sell weapons, to undermine civil liberties, and to disenfranchise ordinary citizens?

Comparing terrorism with other risks

What are the real dangers? What is their comparative size, in terms of numbers of people involved? Science is unanimous in telling us that out-of-control climate change, thermonuclear war, and large-scale famine are the real threats.

Consider what would happen if the change from fossil fuels to 100% renewable energy is not completed within a few decades: We know from the geological record that there have been 5 mass extinction events during each of which more than half of all living organisms became extinct. The largest of these was the Permian-Triassic event, during which 96% of all marine species became extinct, together with 70% of all terrestrial vertebrates.

If we do not quickly shift from fossil fuels to renewable energy, we will be in danger of passing a tipping point, beyond which human efforts to control climate change will be useless because feed-back loops such as the albedo effect and the methane-hydrate feedback loop will have taken over. If we do not act quickly and globally to change from fossil fuels to renewable energy, there is a danger of a human-caused 6th mass extinction. The human species might survive such an event by moving to polar or high mountainous regions, but the global population would then be measured in millions rather than in billions. The family trees of most humans living today would die out. Added to this tragedy, would be the tragic loss of most of the animal and plant species which we value today and strive to protect.

Is a shift from fossil fuels to 100% renewable energy possible? Such a shift must come within a century or so because of the exhaustion of coal, oil and gas resources. However, it is vitally important that the change should come quickly, within a very few decades, to avoid a tipping point beyond which climate change would become uncontrollable. Hope that this energy revolution is indeed technically possible comes especially from the current extremely high rates of growth of wind and solar power. If these growth rates are maintained, the transition to renewable energy can be accomplished within two decades.

It is important that the governmental subsidies that are currently paid to fossil fuel corporations should be discussed at COP21. In 2011, these subsidies amounted to more than \$500 billion globally, compared with only \$88 billion given to support renewable energy initiatives. These proportions must be reversed. In fact, subsidies to fossil fuel corporations ought to be abolished entirely. Given a more level playing field, renewable energy can win simply by being cheaper than fossil fuels.

Let us turn next to the danger of thermonuclear war. Unless nuclear weapons are completely abolished, there will be a continual danger that a catastrophic war of this type may occur by accident or miscalculation. In any given year, this danger is finite, but over a long period of time, the chance that a disaster will not occur becomes vanishingly small. Such a war would be an environmental catastrophe, affecting neutral countries as well as belligerents. Agriculture might be damaged to such an extent that the resulting global famine could involve a large fraction of the world's human population.

Finally, we must consider the threat of a global famine partly due to climate change, but also due to explosively growing human populations and the end of fossil fuels, on which modern high-yield agriculture depends.

9.4 Driven towards war by fake threats

Are we being driven like cattle into another war, by another fake threat? Is Iran really a threat? It is a country which has not attacked any of its neighbors for a century, although it has frequently itself been attacked. Israel has 300 nuclear weapons, and the US has many thousands, yet they claim that Iran's civilian nuclear program is a threat. Is it a real threat, or are we being driven, like cattle, by a false threat.

The precipice towards which we are being driven is very dangerous indeed. There is a real danger that a military attack on Iran could escalate uncontrollably into World War III. As we approach the 100th anniversary of the start of World War I, we should remember that this catastrophic conflagration was started as a limited operation by Austria to punish the Serbian nationalists, but it escalated uncontrollably.

The Middle East is already a deeply troubled region, and it is a region in which the US and Israel cannot be said to be universally popular. Might not an attack on Iran initiate a revolution in Pakistan, thus throwing Pakistan's nuclear weapons into the conflict on the side of Iran? Furthermore, both China and Russia are staunch allies of Iran. Perhaps they would be drawn into the war. At the very least, China would certainly do economic damage to the US by means of its large dollar holdings. Furthermore, much of the world's supply of oil flows through the Straits Hormuz. A conflict in the region would probably stop this flow and send petroleum prices through the roof. The economic consequences would be disastrous.

Let us stop being driven like cattle by invented threats. Let us instead look at the very real dangers that threaten human civilization, and do our utmost to avoid them.



Figure 9.7: Much of the world's supply of oil flows through the Straits Hormuz. A war in the region would undoubtedly stop this flow, sending the price of oil into the stratosphere, with disastrous economic consequences.

9.5 The role of the media

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 both the primary and advanced levels. We urgently need much more public education about the severe dangers that we face today.

9.6 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.

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.

9.7 The mass media have failed us

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.

9.8 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. Below we discuss a few outstanding people who have made extremely important *YouTube* videos on climate change.

Suggestions for further reading

1. Peter Barber, (June 7, 2008). *The truth is out there*. Financial Times. Archived from the original on June 3, 2009.
2. Michael Powell, (September 8, 2006). *The Disbelievers*. Washington Post. Retrieved May 30, 2009.
3. Jonathan Kay, (April 25, 2009). *Richard Gage: 9/11 truther extraordinaire*. Financial Post. Archived from the original on July 1, 2010.
4. Jan Ravensbergen, (May 2, 2010). *9/11 skeptics to speak at UQAM*. Montreal Gazette. Archived from the original on May 4, 2010.
5. Frank Morales, (June 11, 2009). *9/11 Truth comes home; Pols back new investigation*. Villager. Archived from the original on June 14, 2009.
6. Eli Lake, (April 10, 2008). *U.N. Official Calls for Study Of Neocons' Role in 9/11*. New York Sun. Archived from the original on May 29, 2009.
7. *Citizens Petition New York Attorney General to Open 9-11 Inquiry*. Environment News Service. October 29, 2004.
8. Jefferson Siegel, (June 18, 2008). *'Pentagon Papers senator' calls for new 9/11 probe*. Villager. Retrieved June 21, 2009.

9. Tori Sutton, (February 18, 2010). *Seeking the truth about 9/11*. Stratford Gazette. Archived from the original on March 24, 2010.
10. Sonny Bunch, (September 24, 2007). *The Truthers Are Out There*. Weekly Standard. Retrieved September 19, 2011.

Chapter 10

A HISTORY OF INTERNATIONAL LAW

“With law shall our land be built up, but with lawlessness laid waste.” Njal’s Saga, Iceland, c 1270.

10.1 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



Figure 10.1: A portion of Hammurabi's Code, c. 1754 BC

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.

10.2 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 10.2: **King John** is forced to sign the Magna Carta



Figure 10.3: 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”.

10.3 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).

10.4 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 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 assemble 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

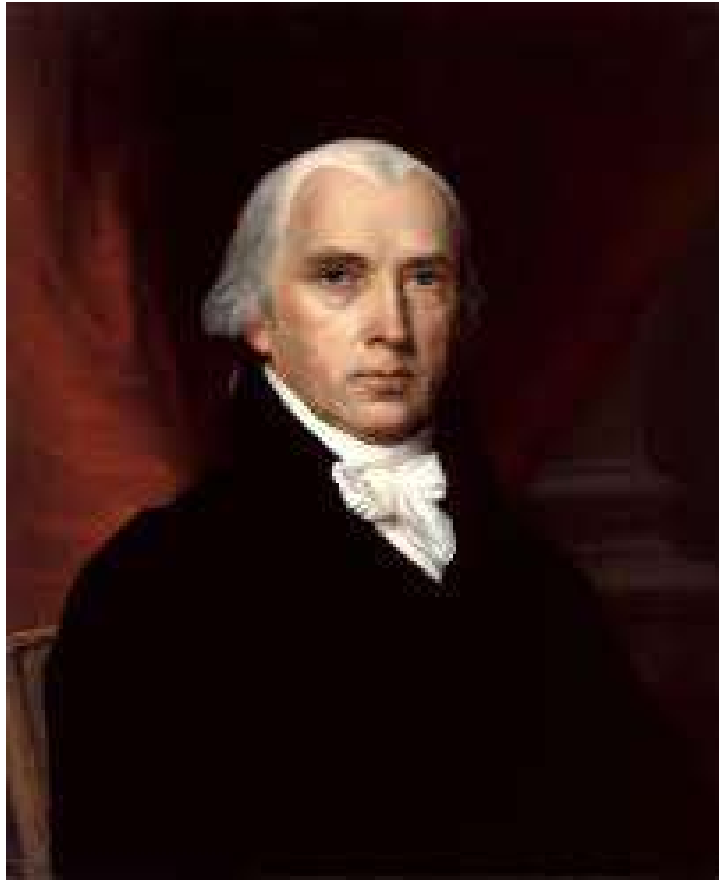


Figure 10.4: James Madison, wrote that the more he reflected on the use of force, the more he doubted “the practicality, the justice and the efficacy of it when applied to people collectively, and not individually.” He later introduced the Constitutional amendments that became the U.S. Bill of Rights.

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.

10.5 Kellogg-Briand Pact, 1928

World War I was a catastrophe that still casts a dark shadow over the future of humanity. It produced enormous suffering, brutalization of values, irreparable cultural loss, and a

total of more than 37 million casualties, military and civilian. Far from being the “war to end war”, the conflict prepared the way for World War II, during which nuclear weapons were developed; and these now threaten the existence the of human species and much of the biosphere.

After the horrors of World War I, the League of Nations was set up in the hope of ending the institution of war forever. However, many powerful nations refused to join the League, and it withered. Another attempt to outlaw war was made in 1928. in the form of a pact named after its authors, U.S. Secretary of State, Frank B. Kellogg and French Foreign Minister Astrid Briand. The Kellogg-Briand Pact is formally called the General Treaty for the Renunciation of War as an Instrument of National Policy. It was ultimately ratified by 62 Nations, including the United States (by a Senate vote of 85 to 1). Although frequently violated, the Pact remains in force today, establishing a norm which legally outlaws war.

10.6 United Nations Charter, 1945

The Second World War was even more disastrous than the First. Estimates of the total number of people who died as a result of the war range between 50 million and 80 million. With the unspeakable suffering caused by the war fresh in their minds, representatives of the victorious allied countries assembled in San Francisco to draft the charter of a global organization which they hoped would end the institution of war once and for all.

The Preamble to the United Nations Charter starts with the words: “We , the peoples of the United Nations, determined to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind; and to unite our strength to maintain international peace and security; and to ensure, by the acceptance of principles and the institution of methods, that armed force shall not be used, save in the common interest; and to employ international machinery for the promotion of the economic and social advancement of all peoples, have resolved to combine our efforts to accomplish these aims.”

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. ¹

Clearly, the United Nations Charter aims at abolishing the institution of war once and for all; but the present Charter has proved to be much too weak to accomplish this purpose,

¹<http://www.un.org/en/documents/charter/preamble.shtml>



Figure 10.5: **Clearly, the United Nations Charter aims at abolishing the institution of war once and for all.**

since it is a confederation of the member states rather than a federation. This does not mean that that our present United Nations is a failure. Far from it! The UN has achieved almost universal membership, which the League of Nations failed to do. The Preamble to the Charter speaks of “the promotion of the economic and social advancement of all peoples”, and UN agencies, such as the World Health Organization, the Food and Agricultural Organization and UNESCO, have worked very effectively to improve the lives of people throughout the world. Furthermore, the UN has served as a meeting place for diplomats from all countries, and many potentially serious conflicts have been resolved by informal conversations behind the scenes at the UN. Finally, although often unenforceable, resolutions of the UN General Assembly and declarations by the Secretary General have great normative value.

When we think of strengthening and reforming the UN, then besides giving it the power to make and enforce laws that are binding on individuals, we should also consider giving it an independent and reliable source of income. As it is, rich and powerful nations seek to control the UN by means of its purse strings: They give financial support only to those actions that are in their own interests.

A promising solution to this problem is the so-called “Tobin tax”, named after the Nobel-laureate economist James Tobin of Yale University. Tobin proposed that international currency exchanges should be taxed at a rate between 0.1 and 0.25 percent. He believed that even this extremely low rate of taxation would have the beneficial effect of damping speculative transactions, thus stabilizing the rates of exchange between currencies. When asked what should be done with the proceeds of the tax, Tobin said, almost as

an afterthought, "Let the United Nations have it."

The volume of money involved in international currency transactions is so enormous that even the tiny tax proposed by Tobin would provide the United Nations with between 100 billion and 300 billion dollars annually. By strengthening the activities of various UN agencies, the additional income would add to the prestige of the United Nations and thus make the organization more effective when it is called upon to resolve international political conflicts. The budgets of UN agencies, such as the World Health Organization, the Food and Agricultural Organization, UNESCO and the UN Development Programme, should not just be doubled but should be multiplied by a factor of at least twenty.

With increased budgets the UN agencies could sponsor research and other actions aimed at solving the world's most pressing problems: AIDS, drug-resistant infections diseases, tropical diseases, food insufficiencies, pollution, climate change, alternative energy strategies, population stabilization, peace education, as well as combating poverty, malnutrition, illiteracy, lack of safe water and so on. Scientists would be less tempted to find jobs with arms-related industries if offered the chance to work on idealistic projects. The United Nations could be given its own television channel, with unbiased news programs, cultural programs, and "State of the World" addresses by the UN Secretary General.

In addition, the voting system of the United Nations General Assembly needs to be reformed, and the veto power in the Security Council needs to be abolished.

10.7 International Court of Justice, 1946

The International Court of Justice (ICJ) is the judicial arm of the United Nations. It was established by the UN Charter in 1945, and it began to function in 1946. The ICJ is housed in the Peace Palace in the Hague, a beautiful building constructed with funds donated by Andrew Carnegie. Since 1946, the IJC has dealt with only 161 cases. The reason for this low number is that only disputes between nations are judged, and both the countries involved in a dispute have to agree to abide by the Court's jurisdiction before the case can be accepted.

Besides acting as an arbitrator in disputes between nations, the IJC also gives advisory opinions to the United Nations and its agencies. An extremely important judgment of this kind was given in 1996: 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 de-

cided “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.”

10.8 Nuremberg Principles, 1947

In 1946, the United Nations General Assembly unanimously affirmed “the principles of international law recognized by the Charter of the Nuremberg Tribunal and the judgment of the Tribunal”. The General Assembly also established an International Law Commission to formalize the Nuremberg Principles. The result was a list that included Principles VI, which is particularly important in the context of the illegality of NATO:

Principle VI: The crimes hereinafter set out are punishable as crimes under international law:



Figure 10.6: In 1946, the United Nations General Assembly unanimously affirmed “the principles of international law recognized by the Charter of the Nuremberg Tribunal and the judgment of the Tribunal”. The General Assembly also established an International Law Commission to formalize the Nuremberg Principles.

a) Crimes against peace: (I) Planning, preparation, initiation or waging of a war of aggression or a war in violation of international treaties, agreements or assurances; (II) Participation in a common plan or conspiracy for accomplishment of any of the acts mentioned under (I).

Robert H. Jackson, who was the chief United States prosecutor at the Nuremberg trials, said that “To initiate a war of aggression is therefore not only an international crime; it is the supreme international crime, differing from other war crimes in that it contains within itself the accumulated evil of the whole.” Furthermore, the Nuremberg principles state that “The fact that a person acted pursuant to order of his Government or of a superior does not relieve him from responsibility under international law, provided a moral choice was in fact possible to him.” The training of soldiers is designed to make the trainees into automatons, who have surrendered all powers of moral judgment to their superiors. The Nuremberg Principles put the the burden of moral responsibility squarely back where it ought to be: on the shoulders of the individual.

10.9 The Universal Declaration of Human Rights, 1948

On December 10, 1948, the General Assembly of the United Nations adopted a Universal Declaration of Human Rights. 48 nations voted for adoption, while 8 nations abstained from voting. Not a single state voted against the Declaration. In addition, the General Assembly decided to continue work on the problem of implementing the Declaration. The Preamble to the document stated that it was intended “as a common standard of

achievement for all peoples and nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms.”

Articles 1 and 2 of the Declaration state that “all human beings are born free and equal in dignity and in rights”, and that everyone is entitled to the rights and freedoms mentioned in the Declaration without distinctions of any kind. Neither race color, sex, language, religion, political or other opinion, national or social origin, property or social origin must make a difference. The Declaration states that everyone has a right to life, liberty and security of person and property. Slavery and the slave trade are prohibited, as well as torture and cruel, inhuman or degrading punishments. All people must be equal before the law, and no person must be subject to arbitrary arrest, detention or exile. In criminal proceedings an accused person must be presumed innocent until proven guilty by an impartial public hearing where all necessary provisions have been made for the defense of the accused.

No one shall be subjected to interference with his privacy, family, home or correspondence. Attacks on an individual’s honor are also forbidden. Everyone has the right of freedom of movement and residence within the borders of a state, the right to leave any country, including his own, as well as the right to return to his own country. Every person has the right to a nationality and cannot be arbitrarily deprived of his or her nationality.

All people of full age have a right to marry and to establish a family. Men and women have equal rights within a marriage and at its dissolution, if this takes place. Marriage must require the full consent of both parties.

The Declaration also guarantees freedom of religion, of conscience, and of opinion and expression, as well as freedom of peaceful assembly and association. Everyone is entitled to participate in his or her own government, either directly or through democratically chosen representatives. Governments must be based on the will of the people, expressed in periodic and genuine elections with universal and equal suffrage. Voting must be secret.

Everyone has the right to the economic, social and cultural conditions needed for dignity and free development of personality. The right to work is affirmed. The job shall be of a person’s own choosing, with favorable conditions of work, and remuneration consistent with human dignity, supplemented if necessary with social support. All workers have the right to form and to join trade unions.

Article 25 of the Declaration states that everyone has the right to an adequate standard of living, including food, clothing, housing and medical care, together with social services. All people have the right to security in the event of unemployment, sickness, disability, widowhood or old age. Expectant mothers are promised special care and assistance, and children, whether born in or out of wedlock, shall enjoy the same social protection. Everyone has the right to education, which shall be free in the elementary stages. Higher education shall be accessible to all on the basis of merit. Education must be directed towards the full development of the human personality and to strengthening respect for human rights and fundamental freedoms. Education must promote understanding, tolerance, and friendship among all nations, racial and religious groups, and it must further the activities of the United Nations for the maintenance of peace.

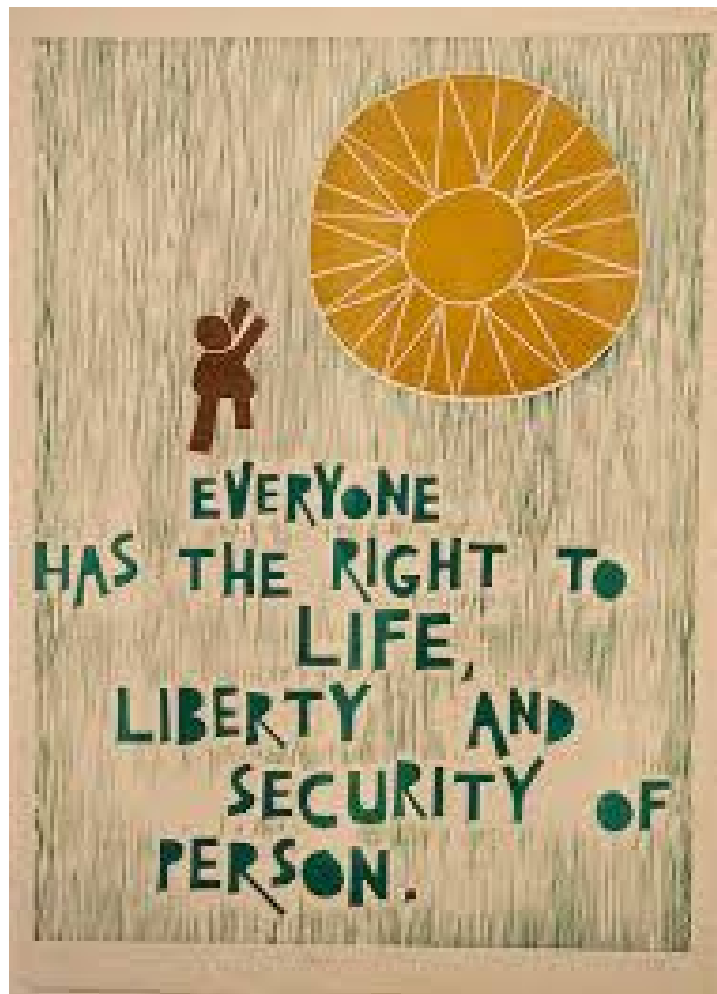


Figure 10.7: The Universal Declaration of Human Rights has great value in defining the norms towards which the world ought to be striving.

A supplementary document, the Convention on the Rights of the Child, was adopted by the United Nations General Assembly on the 12th of December, 1989. Furthermore, in July 2010, the General Assembly passed a resolution affirming that everyone has the right to clean drinking water and proper sanitation.

Many provisions of the Universal Declaration of Human Rights, for example Article 25, might be accused of being wishful thinking. In fact, Jean Kirkpatrick, former US Ambassador to the UN, cynically called the Declaration “a letter to Santa Claus”. Nevertheless, like the Millennium Development Goals, the Universal Declaration of Human Rights has great value in defining the norms towards which the world ought to be striving.

It is easy to find many examples of gross violations of basic human rights that have taken place in recent years. Apart from human rights violations connected with interventions of powerful industrial states in the internal affairs of third world countries, there are many cases where governmental forces in the less developed countries have violated the human

rights of their own citizens. Often minority groups have been killed or driven off their land by those who coveted the land, as was the case in Guatemala in 1979, when 1.5 million poor Indian farmers were forced to abandon their villages and farms and to flee to the mountains of Mexico in order to escape murderous attacks by government soldiers. The blockade of Gaza and extrajudicial killing by governments must also be regarded as blatant human rights violations, and there are many recent examples of genocide.

Wars in general, and in particular, the use of nuclear weapons, must be regarded as gross violations of human rights. The most basic human right is the right to life; but this is right routinely violated in wars. Most of the victims of recent wars have been civilians, very often children and women. The use of nuclear weapons must be regarded as a form of genocide, since they kill people indiscriminately, babies, children, young adults in their prime, and old people, without any regard for guilt or innocence.

10.10 Geneva Conventions, 1949

According to Wikipedia, “The Geneva Conventions comprise four treaties, and three additional protocols, that establish the standards of international law for the humanitarian treatment of war. The singular term, Geneva Convention, usually denotes the agreements of 1949, negotiated in the aftermath of the Second World War (1939-1945), which updated the terms of the first three treaties (1864, 1906, 1929) and added a fourth. The Geneva Conventions extensively defined the basic rights of wartime prisoners (civilians and military personnel); established protection for the wounded; and established protections for civilians in and around a war-zone. The treaties of 1949 were ratified, in whole or with reservations, by 196 countries.”

In a way, one might say that the Geneva Conventions are an admission of defeat by the international community. We tried to abolish war entirely through the UN Charter, but failed because the Charter was too weak.

Under the Fourth Geneva Convention, collective punishment is war crime. Article 33 states that “No protected person may be punished for an offense that he or she did not personally commit.” Articles 47-78 also impose substantial obligations on occupying powers, with numerous provisions for the general welfare of the inhabitants of an occupied territory. Thus Israel violated the Geneva Conventions by its collective punishment of the civilian population of Gaza in retaliation for largely ineffective Hamas rocket attacks. The larger issue, however, is the urgent need for lifting of Israel’s brutal blockade of Gaza, which has created what Noam Chomsky calls the “the world’s largest open-air prison”. This blockade violates the Geneva conventions because Israel, as an occupying power, has the duty of providing for the welfare of the people of Gaza.

10.11 Nuclear Non-Proliferation Treaty, 1968

In the 1960's, negotiations were started between countries that possessed nuclear weapons, and others that did not possess them, to establish a treaty that would prevent the spread of these highly dangerous weapons, but which would at the same time encourage cooperation in the peaceful uses of nuclear energy. The resulting treaty has the formal title Treaty on the Non-Proliferation of Nuclear Weapons (abbreviated as the NPT). The treaty also aimed at achieving general and complete disarmament. It was opened for signature in 1968, and it entered into force on the 11th of May, 1970.

190 parties have joined the NPT, and more countries have ratified it than any other arms limitation agreement, an indication of the Treaty's great importance. Four countries outside the NPT have nuclear weapons: India, Pakistan, North Korea and Israel. North Korea had originally joined the NPT, but it withdrew in 2003. The NPT has three main parts or "pillars", 1) non-proliferation, 2) disarmament, and 3) the right to peaceful use of nuclear technology. The central bargain of the Treaty is that "the NPT non-nuclear weapon states agree never to acquire nuclear weapons and the NPT nuclear weapon states agree to share the benefits of peaceful use of nuclear technology and to pursue nuclear disarmament aimed at the ultimate elimination of their nuclear arsenals".

Articles I and II of the NPT forbid states that have nuclear weapons to help other nations to acquire them. These Articles were violated, for example, by France, which helped Israel to acquire nuclear weapons, and by China, which helped Pakistan to do the same. They are also violated by the "nuclear sharing" agreements, through which US tactical nuclear weapons will be transferred to several countries in Europe in a crisis situation. It is sometimes argued that in the event of a crisis, the NPT would no longer be valid, but there is nothing in the NPT itself that indicates that it would not hold in all situations.

The most blatantly violated provision of the NPT is Article VI. It requires the member states to pursue "negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament", and negotiations towards a "Treaty on general and complete disarmament". In other words, the states that possess nuclear weapons agreed to get rid of them. However, during the 47 years that have passed since the NPT went into force, the nuclear weapon states have shown absolutely no sign of complying with Article VI. There is a danger that the NPT will break down entirely because of the majority of countries in the world are so dissatisfied with this long-continued non-compliance. Looking at the NPT with the benefit of hindsight, we can see the third "pillar", the "right to peaceful use of nuclear technology" as a fatal flaw of the treaty. In practice, it has meant encouragement of nuclear power generation, with all the many dangers that go with it.

The enrichment of uranium is linked to reactor use. Many reactors of modern design make use of low enriched uranium as a fuel. Nations operating such a reactor may claim that they need a program for uranium enrichment in order to produce fuel rods. However, by operating their ultracentrifuge a little longer, they can easily produce highly enriched (weapons-usable) uranium.

The difficulty of distinguishing between a civilian nuclear power generation program

and a military nuclear program is illustrated by the case of Iran. In discussing Iran, it should be mentioned that Iran is fully in compliance with the NPT. It is very strange to see states that are long-time blatant violators of the NPT threaten Iran because of a nuclear program that fully complies with the Treaty. I believe that civilian nuclear power generation is always a mistake because of the many dangers that it entails, and because of the problem of disposing of nuclear waste. However, a military attack on Iran would be both criminal and insane. Why criminal? Because such an attack would violate the UN Charter and the Nuremberg Principles. Why insane? Because it would initiate a conflict that might escalate uncontrollably into World War III.

10.12 Biological Weapons Convention, 1972

During World War II, British and American scientists investigated the possibility of using smallpox as a biological weapon. However, it was never used, and in 1969 President Nixon officially ended the American biological weapons program, bowing to the pressure of outraged public opinion. In 1972, the United States, the United Kingdom and the Soviet Union signed a Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction. Usually this treaty is known as the Biological Weapons Convention (BWC), and it has now been signed by virtually all of the countries of the world.

However, consider the case of smallpox: A World Health Organization team led by D.A. Henderson devised a strategy in which cases of smallpox were isolated and all their contacts vaccinated, so that the disease had no way of reaching new victims. Descriptions of the disease were circulated, and rewards offered for reporting cases. The strategy proved to be successful, and finally, in 1977, the last natural case of smallpox was isolated in Somalia. After a two-year waiting period, during which no new cases were reported, WHO announced in 1979 that smallpox, one of the most frightful diseases of humankind, had been totally eliminated from the world. This was the first instance of the complete eradication of a disease, and it was a demonstration of what could be achieved by the enlightened use of science combined with international cooperation. The eradication of smallpox was a milestone in human history.

It seems that our species is not really completely wise and rational; we do not really deserve to be called “Homo sapiens”. Stone-age emotions and stone-age politics are alas still with us. Samples of smallpox virus were taken to “carefully controlled” laboratories in the United States and the Soviet Union. Why? Probably because these two Cold War opponents did not trust each other, although both had signed the Biological Weapons Convention. Each feared that the other side might intend to use smallpox as a biological weapon. There were also rumors that unofficial samples of the virus had been saved by a number of other countries, including North Korea, Iraq, China, Cuba, India, Iran, Israel, Pakistan and Yugoslavia.

10.13 Chemical Weapons Convention, 1997

On the 3rd of September, 1992, the Conference on Disarmament in Geneva adopted a Convention on the Prohibition of Development, Production, Stockpiling, and Use of Chemical Weapons and on their Destruction. This agreement, which is usually called the Chemical Weapons Convention (CWC), attempted to remedy some of the shortcomings of the Geneva Protocol of 1925. The CWC went into force in 1997, after Hungary deposited the 65th instrument of ratification.

The provisions of Article I of the CWC are as follows: 1. Each State Party to this convention undertakes never under any circumstances: (a) To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone; (b) To use chemical weapons; (c) To engage in any military preparation to use chemical weapons; (d) To assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party in accordance with the provisions of this Convention. 2. Each State Party undertakes to destroy chemical weapons it owns or possesses, or that are located any place under its jurisdiction or control, in accordance with the provisions of this Convention. 3. Each State Party undertakes to destroy all chemical weapons it abandoned on the territory of another State Party, in accordance with the provisions of this Convention. 4. Each State Party undertakes to destroy any chemical weapons production facilities it owns or possesses, or that are located in any place under its jurisdiction or control, in accordance with the provisions of this Convention. 5. Each State Party undertakes not to use riot control agents as a method of warfare.

The CWC also makes provision for verification by teams of inspectors, and by 2004, 1,600 such inspections had been carried out in 59 countries. It also established an Organization for the Prevention of Chemical Warfare. All of the declared chemical weapons production facilities have now been inactivated, and all declared chemical weapons have been inventoried. However of the world's declared stockpile of chemical warfare agents (70,000 metric tons), only 12 percent have been destroyed. One hopes that in the future the CWC will be ratified by all the nations of the world and that the destruction of stockpiled chemical warfare agents will become complete.

10.14 Mine Ban Treaty, 1999

In 1991, six NGOs organized the International Campaign to Ban Landmines, and in 1996, the Canadian government launched the Ottawa process to ban landmines by hosting a meeting among like-minded anti-landmine states. A year later, in 1997, the Mine Ban Treaty was adopted and opened for signatures. In the same year, Jody Williams and the International Campaign to ban Landmines were jointly awarded the Nobel Peace Prize. After the 40th ratification of the Mine Ban Treaty in 1998, the treaty became binding international law on the 1st of March, 1999. The Ottawa Treaty functions imperfectly because of the opposition of several militarily powerful nations, but nevertheless it establishes a valuable norm, and it represents an important forward step in the development of

international law.

10.15 International Criminal Court, 2002

In 1998, in Rome, representatives of 120 countries signed a statute establishing an International Criminal Court (ICC), with jurisdiction over the crime of genocide, crimes against humanity, war crimes and the crime of aggression.

Four years were to pass before the necessary ratifications were gathered, but by Thursday, April 11, 2002, 66 nations had ratified the Rome agreement, 6 more than the 60 needed to make the court permanent. It would be impossible to overstate the importance of the ICC. At last, international law acting on individuals has become a reality! The only effective and just way that international laws can act is to make individuals responsible and punishable, since (in the words of Alexander Hamilton) “To coerce states is one of the maddest projects that was ever devised.”

At present, the ICC functions very imperfectly because of the bitter opposition of several powerful countries, notable the United States. U.S. President George W. Bush signed into law the American Servicemembers Protection Act of 2002, which is intended to intimidate countries that ratify the treaty for the ICC. The new law authorizes the use of military force to liberate any American or citizen of a U.S.-allied country being held by the court, which is located in The Hague. This provision, dubbed the “Hague invasion clause,” has caused a strong reaction from U.S. allies around the world, particularly in the Netherlands.

<http://www.hrw.org/news/2002/08/03/us-hague-invasion-act-becomes-law>

Despite the fact that the ICC now functions so imperfectly, it is a great step forward in the development of international law. It is there and functioning. We have the opportunity to make it progressively more impartial and to expand its powers.

10.16 Arms Trade Treaty, 2013

On April 2, 2013, a historic victory was won at the United Nations, and the world achieved its first treaty limiting international trade in arms. Work towards the Arms Trade Treaty (ATT) began in the Conference on Disarmament in Geneva, which requires a consensus for the adoption of any measure. Over the years, the consensus requirement has meant that no real progress in arms control measures has been made in Geneva, since a consensus among 193 nations is impossible to achieve.

To get around the blockade, British U.N. Ambassador Mark Lyall Grant sent the draft treaty to Secretary-General Ban Ki-moon and asked him on behalf of Mexico, Australia and a number of others to put the ATT to a swift vote in the General Assembly, and on Tuesday, April 3, 2013, it was adopted by a massive majority. Among the people who have worked hardest for the ATT is Anna Macdonald, Head of Arms Control at Oxfam. The reason why Oxfam works so hard on this issue is that trade in small arms is a major cause

of poverty and famine in the developing countries. On April 9, Anna Macdonald wrote: "Thanks to the democratic process, international law will for the first time regulate the 70 billion dollar global arms trade. Had the process been launched in the consensus-bound Conference on Disarmament in Geneva, currently in its 12th year of meeting without even being able to agree on an agenda, chances are it would never have left the starting blocks..."

The passage of the Arms Trade Treaty by a majority vote in the UN General Assembly opened new possibilities for progress on other seemingly-intractable issues. In particular, it gave hope that a Nuclear Weapons Convention might be adopted by a direct vote on the floor of the General Assembly. The adoption of the NWC, even if achieved against the bitter opposition of the nuclear weapon states, would make it clear that the world's peoples consider the threat of an all-destroying nuclear war to be completely unacceptable.

10.17 Racism, Colonialism and Exceptionalism

A just system of laws must apply equally and without exception to everyone. If a person, or, in the case of international law, a nation, claims to be outside the law, or above the law, then there is something fundamentally wrong. For example, when U.S. President Obama said in a 2013 speech, "What makes America different, what makes us exceptional, is that we are dedicated to act", then thoughtful people could immediately see that something was terribly wrong with the system. If we look closely, we find that there is a link between racism, colonialism and exceptionalism. The racist and colonialist concept of "the white man's burden" is linked to the Neo-Conservative self-image of benevolent (and violent) interference in the internal affairs of other countries.²

10.18 The Oslo Principles on Climate Change Obligation, 2015

The future of human civilization and the biosphere is not only threatened by thermonuclear war: It is also threatened by catastrophic climate change. If prompt action is not taken to curb the use of fossil fuels: if the presently known reserves of fossil fuels are not left in the ground, then there is a great danger that we will pass a tipping point beyond which human efforts to stop a catastrophic increase in global temperatures will be useless because feedback loops will have taken over. There is a danger of a human-initiated 6th geological extinction event, comparable with the Permian-Triassic event, during which 96 percent of marine species and 70 percent of terrestrial vertebrates became extinct.

Recently there have been a number of initiatives which aim at making the human obligation to avert threatened environmental mega-catastrophes a part of international law. One of these initiatives can be seen in the proposal of the Oslo Principles on Climate Change

²<http://www.countercurrents.org/avery101013.htm>
<https://www.youtube.com/watch?v=efl6T8lovqY>
<https://www.youtube.com/watch?v=IdBDRbjx9jo>



Figure 10.8: **Recently there have been a number of initiatives which aim at making the human obligation to avert threatened environmental mega-catastrophes a part of international law.**

Obligations; another is the Universal Declaration of the Rights of Mother Earth; and a third can be found in the concept of Biocultural Rights. These are extremely important and hopeful initiatives, and they point to towards the future development of international law for which we must strive.

3

³<https://www.transcend.org/tms/2015/04/oslo-principles-on-global-climate-change-obligations/>

<https://www.transcend.org/tms/2015/04/climate-change-at-last-a-breakthrough-to-our-catastrophic-political-impasse/>

<http://www.commondreams.org/news/2015/04/14/lawsuit-out-love-unprecedented-legal-action-accuses-dutch-government-failing-climate>

<http://www.elgaronline.com/view/journals/jhre/6-1/jhre.2015.01.01.xml>

<http://therightsofnature.org/universal-declaration/>

10.19 Treaty on the Prohibition of Nuclear Weapons, 2017

A Treaty banning nuclear weapons was adopted by a majority vote on the floor of the UN General Assembly, following the precedent set by the Arms Trade Treaty. The Treaty on the Prohibition of Nuclear Weapons was passed on 7 July, 2017. It prohibits the development, testing, production, stockpiling, stationing, transfer, use and threat of use of nuclear weapons, as well as assistance and encouragement to the prohibited activities. For nuclear armed states joining the treaty, it provides for a time-bound framework for negotiations leading to the verified and irreversible elimination of its nuclear weapons programme. The International Campaign to Abolish Nuclear Weapons (ICAN) campaigned vigorously for the adoption of the Treaty, and was awarded the 2017 Nobel Peace Prize for its efforts. Although bitterly opposed by nuclear weapons states, the Treaty has great normative value, and one fervently hopes that the force of public opinion will eventually force all governments to give their citizens what the vast majority long for: a nuclear-weapon-free world.

It is generally agreed that a full-scale nuclear war would have disastrous effects, not only on belligerent nations but also on neutral countries. Mr. Javier Pérez de Cuéllar, former Secretary-General of the United Nations, emphasized this point in one of his speeches:

“I feel”, he said, “That the question may justifiably be put to the leading nuclear powers: by what right do they decide the fate of humanity? From Scandinavia to Latin America, from Europe and Africa to the Far East, the destiny of every man and woman is affected by their actions. No one can expect to escape from the catastrophic consequences of a nuclear war on the fragile structure of this planet...”

“Like supreme arbiters, with our disputes of the moment, we threaten to cut off the future and to extinguish the lives of innocent millions yet unborn. There can be no greater arrogance. At the same time, the lives of all those who lived before us may be rendered meaningless; for we have the power to dissolve in a conflict of hours or minutes the entire work of civilization, with the brilliant cultural heritage of humankind.”

10.20 Hope for the future, and responsibility for the future

Can we abolish the institution of war? Can we hope and work for a time when the terrible suffering inflicted by wars will exist only as a dark memory fading into the past? I believe that this is really possible. The problem of achieving internal peace over a large geographical area is not insoluble. It has already been solved. There exist today many nations or regions within each of which there is internal peace, and some of these are so large that they are almost worlds in themselves. One thinks of China, India, Brazil, the Russian Federation, the United States, and the European Union. Many of these enormous societies contain a variety of ethnic groups, a variety of religions and a variety of languages,

as well as striking contrasts between wealth and poverty. If these great land areas have been forged into peaceful and cooperative societies, cannot the same methods of government be applied globally?

Today, there is a pressing need to enlarge the size of the political unit from the nation-state to the entire world. The need to do so results from the terrible dangers of modern weapons and from global economic interdependence. The progress of science has created this need, but science has also given us the means to enlarge the political unit: Our almost miraculous modern communications media, if properly used, have the power to weld all of humankind into a single supportive and cooperative society.

We live at a critical time for human civilization, a time of crisis. Each of us must accept his or her individual responsibility for solving the problems that are facing the world today. We cannot leave this to the politicians. That is what we have been doing until now, and the results have been disastrous. Nor can we trust the mass media to give us adequate public discussion of the challenges that we are facing. We have a responsibility towards future generations to take matters into our own hands, to join hands and make our own alternative media, to work actively and fearlessly for better government and for a better society.

We, the people of the world, not only have the facts on our side; we also have numbers on our side. The vast majority of the world's peoples long for peace. The vast majority long for abolition of nuclear weapons, and for a world of kindness and cooperation, a world of respect for the environment. No one can make these changes alone, but together we can do it.

Together, we have the power to choose a future where international anarchy, chronic war and institutionalized injustice will be replaced by democratic and humane global governance, a future where the madness and immorality of war will be replaced by the rule of law.

We need a sense of the unity of all mankind to save the future, a new global ethic for a united world. We need politeness and kindness to save the future, politeness and kindness not only within nations but also between nations. To save the future, we need a just and democratic system of international law; for with law shall our land be built up, but with lawlessness laid waste.

Suggestions for further reading

1. B. Fassbender and A. Peters (eds.), S. Peter and D. Högger (assistant eds.), *The Oxford Handbook of the History of International Law*
2. W.G. Grewe, *Epochen der Völkerrechtsgeschichte*, translated as *The Epochs of International Law*
3. M. Koskenniemi, *The Gentle Civilizer of Nations*
4. A. Nussbaum, *A Concise History of the Law of Nations*

5. H. Legoh  rel, *Histoire du Droit International Public*
6. A. Truyol y Serra, *Histoire du Droit International Public*
7. S. Laghmani, *Histoire du droit des gens*
8. D. Gaurier, *Histoire du droit international*
9. C. Focarelli, *Lezioni di Storia del Diritto Internazionale*
10. A. Eyffinger (ed.), *Compendium volkenrechtsgeschiedenis*
11. Journal of the History of International Law, since 1999
12. Book series: *Studien zur Geschichte des V  lkerrechts* (Max Planck Institut f  r europ  ische Rechtsgeschichte, Nomos Verslag)
13. Book series: *Studies in the History of International Law* (Martinus Nijhoff)
14. Barnes, Thomas Garden (2008). *Shaping the Common Law: From Glanvill to Hale, 1188-1688*. Stanford University Press.
15. Black, Charles (1999). *A New Birth of Freedom: Human Rights, Named and Unnamed*. New Haven, CN: Yale University Press.
16. Breay, Claire (2010). *Magna Carta: Manuscripts and Myths*. London: The British Library.
17. Breay, Claire; Harrison, Julian, eds. (2015). *Magna Carta: Law, Liberty, Legacy*. London: The British Library.
18. Browning, Charles Henry (1898). "The Magna Charta Described". *The Magna Charta Barons and Their American Descendants with the Pedigrees of the Founders of the Order of Runnemede Deduced from the Sureties for the Enforcement of the Statutes of the Magna Charta of King John*. Philadelphia.
19. Burdett, Francis (1810). *Sir Francis Burdett to His Constituents*. R. Bradshaw.
20. Carpenter, David A. (1990). *The Minority of Henry III*. Berkeley and Los Angeles: University of California Press.
21. Carpenter, David (1996). *The Reign of Henry III*. London: Hambledon Press.
22. Carpenter, David A. (2004). *Struggle for Mastery: The Penguin History of Britain 1066-1284*. London: Penguin.
23. Clanchy, Michael T. (1997). *Early Medieval England*. The Folio Society.
24. Clark, David (2000). *The Icon of Liberty: The Status and Role of Magna Carta in Australian and New Zealand Law*. Melbourne University Law Review. 24 (3).
25. Cobbett, William; Howell, Thomas Bayly; Howell, Th.J.; Jardine, William (1810). *Cobbett's Complete Collection of State Trials and Proceedings for High Treason and Other Crimes and Misdemeanors from the Earliest Period to the Present Time*. Bagshaw.

Chapter 11

THE UNITED NATIONS CHARTER

11.1 The San Francisco Conference

After the unspeakable horrors of World War II, delegates from 50 Allied nations met in San Francisco California. The purpose of the conference, which took place between 25 April and 26 June, 1945, was to set up an international organization that would be able to abolish the institution of war. However, the Charter which the delegates produced was too weak to achieve this goal.

In many respects the United Nations has been highly successful. During the 73 years that have passed since its establishment, a world war has been avoided. The agencies of the United Nations, such as the World Health Organization, the Food and Agricultural Organization, UNESCO and the IPCC, have provided urgently-needed services to the international community. The Universal Declaration of Human Rights, and the Millennium Development Goals have set up norms towards which we can and should aim. Furthermore, the UN has provided a place where representatives from many nations can meet for informal diplomacy, through which many dangerous conflicts have been avoided.

Nevertheless, the United Nations, with its present Charter, has proved to be too weak to achieve the purpose for which it was established - the complete abolition of the institution of war. If civil wars are included, there are, on any given day, an average of 12 wars somewhere in the world. The task of abolishing war has become extremely urgent since the advent of thermonuclear weapons. The danger that these weapons will be used, through accident, technical or human error, or through uncontrollable escalation of a war with conventional weapons, poses an existential threat to human civilization and the biosphere.



Figure 11.1: Harold Stassen. In 1985 he visited Denmark to lecture at a symposium entitled "Towards a Non-Violent Society". At that time he was the only living person who had signed the United Nations Charter. In his lecture, former Governor Stassen proposed steps for reforming the Charter.

11.2 Article 1

The Purposes of the United Nations are:

1. To maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace;
2. To develop friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, and to take other appropriate measures to strengthen universal peace;
3. To achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion; and
4. To be a centre for harmonizing the actions of nations in the attainment of these common ends.

11.3 Article 2

The Organization and its Members, in pursuit of the Purposes stated in Article 1, shall act in accordance with the following Principles.

1. The Organization is based on the principle of the sovereign equality of all its Members.
2. All Members, in order to ensure to all of them the rights and benefits resulting from membership, shall fulfill in good faith the obligations assumed by them in accordance with the present Charter.
3. All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered.
4. 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, or in any other manner inconsistent with the Purposes of the United Nations.
5. All Members shall give the United Nations every assistance in any action it takes in accordance with the present Charter, and shall refrain from giving assistance to any state against which the United Nations is taking preventive or enforcement action.

6. The Organization shall ensure that states which are not Members of the United Nations act in accordance with these Principles so far as may be necessary for the maintenance of international peace and security.
7. Nothing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any state or shall require the Members to submit such matters to settlement under the present Charter; but this principle shall not prejudice the application of enforcement measures under Chapter VII.

Clearly the aim United Nations Charter is to abolish the institution of war.

11.4 Against the institution of war

As we start the 21st century and the new millennium, our scientific and technological civilization seems to be entering a period of crisis. Today, for the first time in history, science has given to humans the possibility of a life of comfort, free from hunger and cold, and free from the constant threat of infectious disease. At the same time, science has given us the power to destroy civilization through thermonuclear war, as well as the power to make our planet uninhabitable through pollution and overpopulation. The question of which of these alternatives we choose is a matter of life or death to ourselves and our children.

Science and technology have shown themselves to be double-edged, capable of doing great good or of producing great harm, depending on the way in which we use the enormous power over nature, which science has given to us. For this reason, ethical thought is needed now more than ever before. The wisdom of the world's religions, the traditional wisdom of humankind, can help us as we try to insure that our overwhelming material progress will be beneficial rather than disastrous.

The crisis of civilization, which we face today, has been produced by the rapidity with which science and technology have developed. Our institutions and ideas adjust too slowly to the change. The great challenge which history has given to our generation is the task of building new international political structures, which will be in harmony with modern technology. At the same time, we must develop a new global ethic, which will replace our narrow loyalties by loyalty to humanity as a whole.

In the long run, because of the enormously destructive weapons, which have been produced through the misuse of science, the survival of civilization can only be insured if we are able to abolish the institution of war.

While in earlier epochs it may have been possible to confine the effects of war mainly to combatants, in our own century the victims of war have increasingly been civilians, and especially children. For example, according to Quincy Wright's statistics, the First and Second World Wars together cost the lives of 26 million soldiers, but the toll in civilian lives was much larger: 64 million. Since the Second World War, despite the best efforts of the U. N., there have been over 150 armed conflicts; and, if civil wars are included, there

are on any given day an average of 12 wars somewhere in the world. In the conflicts in Indo-China, the proportion of civilian victims was between 80 percent and 90 percent, while in the Lebanese civil war some sources state that the proportion of civilian casualties was as high as 97 percent.

Civilian casualties often occur through malnutrition and through diseases, which would be preventable in normal circumstances. Because of the social disruption caused by war, normal supplies of food, safe water and medicine are interrupted, so that populations become vulnerable to famine and epidemics. In the event of a catastrophic nuclear war, starvation and disease would add greatly to the loss of life caused by the direct effects of nuclear weapons.

The indirect effects of war are also enormous. Globally, preparations for war interfere seriously with the use of tax money for constructive and peaceful purposes. Today, despite the end of the Cold War, the world spends roughly a trillion (i.e. a million million) US dollars each year on armaments. This enormous flood of money, which is almost too large to imagine, could have been used instead for urgently needed public health measures.

The World Health Organization lacks funds to carry through an anti-malarial program on as large a scale as would be desirable, but the entire program could be financed for less than the world spends on armaments in a single day. Five hours of world arms spending is equivalent to the total cost of the 20-year WHO campaign, which resulted in the eradication of smallpox. For every 100,000 people in the world, there are 556 soldiers, but only 85 doctors. Every soldier costs an average of 20,000 US dollars per year, while the average spent per year on education is only 380 US dollars per school-aged child. With a diversion of funds consumed by three weeks of military spending, the world could create a sanitary water supply for all its people, thus eliminating the cause of almost half of all human illness.

A new and drug-resistant form of tuberculosis has recently become widespread, and is increasing rapidly in the former Soviet Union. In order to combat this new form of tuberculosis, and in order to prevent its spread to Western Europe, WHO needs 450 million US dollars, an amount equivalent to 4 hours of world arms spending. By using this money to combat tuberculosis in the former Soviet Union, WHO would be making a far greater contribution to global peace and stability than is made by spending the money on armaments.

Today's world is one in which roughly ten million children die each year from diseases related to poverty. Besides this enormous waste of young lives through malnutrition and preventable disease, there is a huge waste of opportunities through inadequate education. The rate of illiteracy in the 25 least developed countries is 80 percent, and the total number of illiterates in the world is estimated to be 800 million. Meanwhile every 60 seconds the world spends roughly 2 million U. S. dollars on armaments.

It is 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, but today the world spends more than 20 times as much per year on weapons as it does on development.

Because the world spends a 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 a social institution, and also the reason why war persists, although everyone realizes that it is the cause of much of the suffering that inflicts humanity. We know that war is madness, but it persists. We know that it threatens the future survival of our species, but it persists, entrenched in the attitudes of historians, newspaper editors and television producers, entrenched in the methods by which politicians finance their campaigns, and entrenched in the financial power of arms manufacturers, entrenched also in the ponderous and costly hardware of war, the fleets of warships, bombers, tanks, nuclear missiles and so on.

Science cannot claim to be guiltless: In Eisenhower's farewell address, he warned of the increasing power of the industrial-military complex, a threat to democratic society. If he were making the same speech today, he might speak of the industrial-military-scientific complex. Since Hiroshima, we have known that new knowledge is not always good. There is a grave danger that nuclear weapons will soon proliferate to such an extent that they will be available to terrorists and even to the Mafia. Chemical and biological weapons also constitute a grave threat. The eradication of smallpox in 1979 was a triumph of medical science combined with international cooperation. How sad it is to think that military laboratories cultivate smallpox and that the disease may soon be reintroduced as a biological weapon!

The institution of war seems to be linked to a fault in human nature, to our tendency to exhibit altruism towards members of our own group but aggression towards other groups if we perceive them to be threatening our own community. This tendency, which might be called "tribalism", was perhaps built into human nature by evolution during the long pre-history of our species, when we lived as hunter-gatherers in small genetically homogeneous tribes, competing for territory on the grasslands of Africa. However, in an era of nerve gas and nuclear weapons, the anachronistic behavior pattern of tribal altruism and intertribal aggression now threatens our survival.

Fortunately, our behavior is only partly determined by inherited human nature. It is also, and perhaps to a larger extent, determined by education and environment; and in spite of all the difficulties just mentioned, war has been eliminated locally in several large regions of the world. Taking these regions as models, we can attempt to use the same methods to abolish war globally. For example, war between the Scandinavian nations would be unthinkable today, although the region once was famous for its violence. Scandinavia is especially interesting as a model for what we would like to achieve globally, because it is a region in which it has been possible not only to eradicate war, but also poverty; and at the same time, death from infectious disease has become a rarity in this region.

If we consider the problem of simultaneously eliminating poverty, war and frequent death from infectious disease, we are lead inevitably to the problem of population stabilization. At the time when poverty, disease and war characterized Scandinavia, the average fertility in the region was at least 6 children per woman-life. Equilibrium was maintained at this high rate of fertility, because some of the children died from disease without leaving progeny, and because others died in war. Today, poverty and war are gone from the Nordic countries, and the rate of premature death from infectious disease is very low. The simultaneous

elimination of poverty, disease and war would have been impossible in Scandinavia if the rate of fertility had not fallen to the replacement level. There would then have been no alternative except for the population to grow, which it could not have continued to do over many centuries without environmental degradation, bringing with it the recurrence of poverty, disease and war.

In Scandinavia today, democratic government, a high level of education, economic prosperity, public health, high social status for women, legal, economic and educational equality for women, a low birth rate, and friendly cooperation between the nations of the region are mutually linked in loops of cause and effect. By contrast, we can find other regions of the world where low status of women, high birth rates, rapidly increasing population, urban slums, low educational levels, high unemployment levels, poverty, ethnic conflicts and the resurgence of infectious disease are equally linked, but in a vicious circle. The three age-old causes of human suffering, poverty, infectious disease and war are bound together by complex causal relationships involving also the issues of population stabilization and women's rights. The example of Scandinavia shows us that it is possible to cure all these diseases of society; but to do so we must address all of the problems simultaneously.

Abolition of the institution of war will require the construction of structures of international government and law to replace our present anarchy at the global level. Today's technology has shrunk the distances, which once separated nations; and our present system of absolutely sovereign nation-states has become both obsolete and dangerous.

Professor Elie Kedourie of the University of London has given the following definition of nationalism: "...a doctrine invented in Europe at the beginning of the 19th century. It pretends to supply a criterion for the determination of the unit of population proper to enjoy a government exclusively its own, for the legitimate exercise of power in the state, and for the right organization of a society of states. Briefly, the doctrine holds that humanity is naturally divided into nations, that nations are known by certain characteristics which can be ascertained, and that the only legitimate type of government is national self-government."

A basic problem with this doctrine is that throughout most of the world, successive waves of migration, conquest and intermarriage have left such a complicated ethnic mosaic that attempts to base political divisions on ethnic homogeneity often meet with trouble. In Eastern Europe, for example, German-speaking and Slavic-speaking peoples are mixed together so closely that the Pan-German and Pan-Slavic movements inevitably clashed over the question of who should control the regions where the two populations lived side by side. This clash was one of the main causes of the First World War.

Similarly, when India achieved independence from England, a great problem arose in the regions where Hindus and Moslems lived side by side; and even Gandhi was unable to prevent terrible violence from taking place between the two communities. This problem is still present, and it has been made extremely dangerous by the acquisition of nuclear weapons by India and Pakistan.

More recently, nationalist movements in Asia and Africa have derived their force and popularity from a reaction against the years of European political and economic domination. Thus, at first sight, they seem to deserve our sympathy and support. However, in

building states, the new nationalists have often used hate for outsiders as mortar. For example, Israel is held together by hostility towards its Arab neighbors, while the Pan-Arab movement is held together by hostility towards Israel; and in this inflamed political climate of mutual fear and hatred, even clandestine nuclear weapons appear to either side to be justified.

A basic problem rooted in nationalist mythology exists in the concept of sanctions, which treat nations as if they were individuals. We punish nations as a whole by sanctions, even when only the leaders are guilty, even though the burdens of the sanctions often fall most heavily on the weakest and least guilty of the citizens, and even though sanctions often have the effect of uniting the citizens of a country behind the guilty leaders.

It is becoming increasingly clear that the concept of the absolutely sovereign nation-state is an anachronism in a world of thermonuclear weapons, instantaneous communication, and economic interdependence. Probably our best hope for the future lies in developing the United Nations into a World Federation. The strengthened United Nations should have a legislature with the power to make laws which are binding on individuals, and the ability to arrest and try individual political leaders for violations of these laws. The World Federation should also have the military and legal powers necessary to guarantee the human rights of ethnic minorities within nations.

In setting up a federation, the member states can decide which powers they wish to delegate to it; and all powers not expressly delegated are retained by the individual states. We are faced with the problem of constructing a new world order which will preserve the advantages of local self-government while granting certain carefully-chosen powers to larger regional or global authorities. Which things should be decided locally, or regionally, and which globally?

In the future, overpopulation and famine are likely to become increasingly difficult and painful problems in several parts of the world. Since various cultures take widely different attitudes towards birth control and family size, the problem of population stabilization seems to be one which should be solved locally. At the same time, aid for local family planning programs, as well as famine relief, might appropriately come from global agencies, such as WHO and FAO. With respect to large-scale migration, it would be unfair for a country which has successfully stabilized its own population, and which has eliminated poverty within its own borders, to be forced to accept a flood of migrants from regions of high fertility. Therefore the extent of immigration should be among the issues to be decided locally.

Security, and controls on the manufacture and export of armaments will require an effective authority at the global level. It should also be the responsibility of the international community to intervene to prevent gross violations of human rights. Since the end of the Cold War, the United Nations has more and more frequently been called upon to send armed forces to troubled parts of the world. In many instances, these calls for U. N. intervention have been prompted by clear and atrocious violations of human rights, for example by "ethnic cleansing" in Bosnia and by genocide in Rwanda. In the examples just named, the response of the United Nations would have been much more effective, and many lives would have been saved, if the action which was finally taken had come sooner. Long and

complex diplomatic negotiations were required to muster the necessary political and physical forces needed for intervention, by which time the original problems had become much more severe. For this reason, it has been suggested that the U. N. Secretary General, the Security Council and the General Assembly ought to have at their disposal a permanent, highly trained and highly mobile emergency force, composed of volunteers from all nations. Such an international police force would be able to act rapidly to prevent gross violations of human rights or other severe breaches of international law.

In evaluating the concept of an international police force directly responsible to the United Nations, it is helpful to examine the way in which police act to enforce laws and to prevent violence and crime at local and national levels. Within a community which is characterized by good government, police are not highly armed, nor are they very numerous. Law and order are not maintained primarily by the threat of force, but by the opinion of the vast majority of the citizens that the system of laws is both just and necessary. Traffic stops when the signal light is red and moves when it is green whether or not a policeman is present, because everyone understands why such a system is necessary. Nevertheless, although the vast majority of the citizens in a well-governed community support the system of laws and would never wish to break the law, we all know that the real world is not heaven. The total spectrum of human nature includes evil as well as a good. If there were no police at all, and if the criminal minority were completely unchecked, every citizen would be obliged to be armed. No one's life or property would be safe. Robbery, murder and rape would flourish.

Within a society with a democratic and just government, whose powers are derived from the consent of the governed, a small and lightly armed force of police is able to maintain the system of laws. One reason why this is possible has just been mentioned - the force of public opinion. A second reason is that the law acts on individuals. Since obstruction of justice and the murder of policemen both rank as serious crimes, an individual criminal is usually not able to organize massive resistance against police action.

Edith Wynner, one of the pioneers of the World Federalist movement, lists the following characteristics of police power in a well-governed society:

1. "A policeman operates within a framework of organized government having legislative, executive and judicial authority operating on individuals. His actions are guided by a clearly stated criminal code that has the legislative sanction of the community. Should he abuse the authority vested in him, he is subject to discipline and court restraint."
2. "A policeman seeing a fight between two men does not attempt to determine which of them is in the right and then help him beat up the one he considers wrong. His function is to restrain violence by both, to bring them before a judge who has authority to determine the rights of the dispute, and to see that the court's decision is carried out."
3. "In carrying out his duties, the policeman must apprehend the suspected individual without jeopardizing either the property or the lives of the community where the

suspect is to be arrested. And not only is the community safeguarded against destruction of property and loss of life but the rights of the suspect are also carefully protected by an elaborate network of judicial safeguards.”

Looking towards the future, we can perhaps foresee a time when the United Nations will have been converted to a federation and given the power to make international laws which are binding on individuals. Under such circumstances, true international law enforcement will be possible, incorporating all of the needed safeguards for lives and property of the innocent. One can hope for a future world where the institution of war will be abolished, and where public opinion will support international law to such an extent that a new Hitler or a future Malosovic will not be able to organize large-scale resistance to arrest, a world where international law will be seen by all to be just, impartial and necessary, a well-governed global community within which each person will owe his or her ultimate loyalty to humanity as a whole.

Besides a humane, democratic and just framework of international law and governance, we urgently need a new global ethic, - an ethic where loyalty to family, community and nation will be supplemented by a strong sense of the brotherhood of all humans, regardless of race, religion or nationality. Schiller expressed this feeling in his “Ode to Joy”, the text of Beethoven’s Ninth Symphony. Hearing Beethoven’s music and Schiller’s words, most of us experience an emotion of resonance and unity with its message: All humans are brothers and sisters - not just some - all! It is almost a national anthem of humanity. The feelings which the music and words provoke are similar to patriotism, but broader. It is this sense of a universal human family, which we need to cultivate in education, in the mass media, and in religion.

Educational reforms are urgently needed, particularly in the teaching of history. As it is taught today, history is a chronicle of power struggles and war, told from a biased national standpoint. Our own race or religion is superior; our own country is always heroic and in the right.

We urgently need to replace this indoctrination in chauvinism by a reformed view of history, where the slow development of human culture is described, giving adequate credit to all those who have contributed. Our modern civilization is built on the achievements of ancient cultures. China, India, Mesopotamia, ancient Egypt, Greece, the Islamic world, Christian Europe, and Jewish intellectual traditions all have contributed. Potatoes, corn and squash are gifts from the American Indians. Human culture, gradually built up over thousands of years by the patient work of millions of hands and minds, should be presented to students of history as a precious heritage - far too precious to be risked in a thermonuclear war.

In the teaching of science too, reforms are needed. Graduates in science and technology should be conscious of their responsibilities. They must resolve never to use their education in the service of war, or in any way which might be harmful to society or to the environment.

In modern societies, mass media play an extremely important role in determining behavior and attitudes. This role can be a negative one when the media show violence and enemy images, but if used constructively, the mass media can offer a powerful means for

creating international understanding. If it is indeed true that tribalism is part of human nature, it is extremely important that the mass media be used to the utmost to overcome the barriers between nations and cultures. Through increased communication, the world's peoples can learn to accept each other as members of a single family.

Finally, let us turn to religion, with its enormous influence on human thought and behavior. Christianity, for example, offers a strongly stated ethic, which, if practiced, would make war impossible. In Mathew, the following passage occurs: "Ye have heard it said: Thou shalt love thy neighbor and hate thy enemy. But I say unto you: Love your enemies, bless them that curse you, do good to them that hate you, and pray for them that spitefully use you and persecute you."

This seemingly impractical advice, that we should love our enemies, is in fact of the greatest practicality, since acts of unilateral kindness and generosity can stop escalatory cycles of revenge and counter-revenge such as those which characterize the present conflict in the Middle East and the recent troubles of Northern Ireland. However, Christian nations, while claiming to adhere to the ethic of love and forgiveness, have adopted a policy of "massive retaliation", involving systems of thermonuclear missiles whose purpose is to destroy as much as possible of the country at which the retaliation is aimed. It is planned that entire populations shall be killed in a "massive retaliation", innocent children along with the guilty politicians. The startling contradiction between what the Christian nations profess and what they do was obvious even before the advent of nuclear weapons, at the time when Leo Tolstoy, during his last years, was exchanging letters with a young Indian lawyer in South Africa. In one of his letters to Gandhi, Tolstoy wrote:

"...The whole life of the Christian peoples is a continuous contradiction between that which they profess and the principles on which they order their lives, a contradiction between love accepted as the law of life, and violence, which is recognized and praised, acknowledged even as a necessity..."

"This year, in the spring, at a Scripture examination at a girls' high school in Moscow, the teacher and the bishop present asked the girls questions on the Commandments, and especially on the sixth. After a correct answer, the bishop generally put another question, whether murder was always in all cases forbidden by God's law; and the unhappy young ladies were forced by previous instruction to answer 'Not always' - that murder was permitted in war and in the execution of criminals. Still, when one of these unfortunate young ladies (what I am telling is not an invention but a fact told to me by an eye witness) after her first answer, was asked the usual question, if killing was always sinful, she, agitated and blushing, decisively answered 'Always', and to the usual sophisms of the bishop, she answered with decided conviction that killing was always forbidden in the Old Testament and forbidden by Christ, not only killing but every wrong against a brother. Notwithstanding all his grandeur and arts of speech, the bishop became silent and the girl remained victorious."

As everyone knows, Gandhi successfully applied the principle of non-violence to the civil rights struggle in South Africa, and later to the political movement, which gave India its freedom and independence. The principle of non-violence was also successfully applied by Martin Luther King, and by Nelson Mandela. It is perhaps worthwhile to consider

Gandhi's comment on the question of whether the end justifies the means: "The means may be likened to a seed", Gandhi wrote, "and the end to a tree; and there is the same inviolable connection between the means and the end as there is between the seed and the tree." In other words, a dirty method produces a dirty result; killing produces more killing; hate leads to more hate. Everyone who reads the newspapers knows that this is true. But there are positive feedback loops as well as negative ones. A kind act produces a kind response; a generous gesture is returned; hospitality results in reflected hospitality. Buddhists call this principle of reciprocity "the law of karma".

The religious leaders of the world have the opportunity to contribute importantly to the solution of the problem of war. They have the opportunity to powerfully support the concept of universal human brotherhood, to build bridges between religious groups, to make intermarriage across ethnic boundaries easier, and to soften the distinctions between communities. If they fail to do this, they will have failed humankind at a time of crisis.

It is useful to consider the analogy between the institution of war and the institution of slavery. We might be tempted to say, "There has always been war, throughout human history; and war will always continue to exist." As an antidote for this kind of pessimism, we can think of slavery, which, like war, has existed throughout most of recorded history. The cultures of ancient Egypt, Greece and Rome were all based on slavery, and, in more recent times, 13 million Africans were captured and forced into a life of slavery in the New World. Slavery was as much an accepted and established institution as war is today. Many people made large profits from slavery, just as arms manufacturers today make enormous profits. Nevertheless, in spite of the weight of vested interests, slavery has now been abolished throughout most of the world.

Today we look with horror at drawings of slave ships, where human beings were packed together like cord-wood; and we are amazed that such cruelty could have been possible. Can we not hope for a time when our descendants, reading descriptions of the wars of the twentieth century, will be equally amazed that such cruelty could have been possible? If we use them constructively, the vast resources now wasted on war can initiate a new era of happiness and prosperity for the family of man. It is within our power to let this happen. The example of the men and women who worked to rid the world of slavery can give us courage as we strive for a time when war will exist only as a dark memory fading into the past.

11.5 Reforming the UN Charter

History has given all of us living today an enormous responsibility, and two daunting tasks: If civilization is to survive, we must not only stabilize the global population but also, even more importantly, we must eliminate the institution of war.

We face these difficult tasks with an inherited emotional nature that has not changed much during the last 40,000 years. Furthermore, we face the challenges of the 21st century with an international political system based on the anachronistic concept of the absolutely sovereign nation-state. However, the human brain has shown itself to be capable of solving

even the most profound and complex problems. The mind that has seen into the heart of the atom must not fail when confronted with paradoxes of the human heart.

We must replace the old world of international anarchy, chronic war and institutionalized injustice, by a new world of law. The United Nations Charter, the Universal Declaration of Human Rights and the International Criminal Court are steps in the right direction, but these institutions need to be greatly strengthened and reformed.

We also need a new global ethic, where loyalty to one's family and nation will be supplemented by a higher loyalty to humanity as a whole.

In the words of the great Hungarian-American biochemist Albert Szent-Györgyi, "Man lives in a new cosmic world for which he was not made. His survival depends on how well and how fast he can adapt himself to it, rebuilding all his ideas, all his social and political institutions. ...Modern science has abolished time and distance as factors separating nations. On our shrunken globe today, there is room for one group only - the family of man."

The Russell-Einstein Manifesto of 1955, which led to the founding of Pugwash Conferences on Science and World Affairs, contains the following words: "There lies before us, if we choose, continual progress in happiness, knowledge, and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal as human beings to human beings: Remember your humanity, and forget the rest."

Features of a reformed UN Charter

The United Nations should be given a bicameral legislature. This would consist of an unchanged General Assembly and a much reformed and possibly renamed Security Council. In the reformed and democratized Security Council, the veto power would be absent, and final votes would be taken between regions with roughly equal populations.

In both the General Assembly and the reformed Security Council, legislature approved by a simple majority would pass, but the approval of both chambers would be needed for the legislation to become international law.

The laws would act on individuals, who could be arrested for violations, and tried by an expanded and reformed International Criminal Court even if they happened to be heads of state.

These reforms would give the United Nations a much improved decision-making capacity.

Effectiveness

Since the end of the Cold War, the United Nations has more and more frequently been called upon to send armed forces to troubled parts of the world. In many instances, these calls for U. N. intervention have been prompted by clear and atrocious violations of human rights, for example by "ethnic cleansing" in Bosnia and by genocide in Rwanda. In the examples just named, the response of the United Nations would have been much more effective, and many lives would have been saved, if the action which was finally taken had come sooner.

Long and complex diplomatic negotiations were required to muster the necessary political and physical forces needed for intervention, by which time the original problems had become much more severe.

For this reason, the governance model put forward above proposes that the U. N. Secretary General, the Security Council and the General Assembly ought to have at their disposal a permanent, highly trained and highly mobile emergency force, composed of volunteers from all nations. Such an international police force would be able to act rapidly to prevent gross violations of human rights or other severe breaches of international law.

Within a society with a democratic and just government, whose powers are derived from the consent of the governed, a small and lightly armed force of police is able to maintain the system of laws. One reason why this is possible has just been mentioned - the force of public opinion. A second reason is that the law acts on individuals. Since obstruction of justice and the murder of policemen both rank as serious crimes, an individual criminal is usually not able to organize massive resistance against police action.

Resources and Financing

An extremely important first step towards strengthening the United Nations would be to give the U.N. a greatly enlarged and reliable source of income. The amount of money available to the U.N., and its member organizations such as UNESCO, WHO and FAO, should be increased by a factor of at least 50. The beneficial services rendered by expanded agencies such as WHO would give the U.N. *de facto* power and prestige that could be used in situations where conflict resolution is needed.

Various sources of increased income have been proposed:

- Dues paid to the U.N. by member states. These should be compulsory in the sense that member states would lose their voting rights if they did not pay their dues.
- Revenues from resources belonging to the international community, for example seabed resources.
- A tax on multinational corporations for the service of regulating international agreements.
- The Tobin tax, i.e. a tax of between 0.1% and 1% on international currency transactions.

12 European countries favor the Tobin tax. These include France and Germany, although not the U.K.

Tobin taxes are in place in some of the world's fastest-growing financial centers - Hong Kong, Mumbai, Seoul, Johannesburg and Taipei - where they are said to collectively raise 12 billion U.K. pounds a year.

The volume of international currency transactions is so enormous that a universally imposed Tobin tax of only 0.5% would raise between \$100 billion and \$300 billion per year. In 2015 the total UN budget was only \$5.6 billion, an absurdly small sum, considering the enormous importance of global governance, or the fact that the world spends \$1.7 trillion each year on armaments..

General Security

The problem of building a stable, just, and war-free world is difficult, but it is not impossible. The large regions of our present-day world within which war has been eliminated can serve as models. There are a number of large countries with heterogeneous populations within which it has been possible to achieve internal peace and social cohesion, and if this is possible within such extremely large regions, it must also be possible globally.

When we ask how very large and heterogeneous states achieve internal peace and security, we find that they do so by means of laws that act directly on individual citizens. Thus, the International Criminal Court is an extremely important first step towards the globalization of the methods of governance used by large states. In the Description section, we noted that the power to make and enforce laws which act directly on individuals is one of the key powers of successful federations.

Flexibility

In federations of states, all powers not expressly granted to the federal government are retained by the member states. Thus it is possible to grant powers one at a time, to see how they work in practice, and to gradually grant other powers.

Historically, most federations have begun with very limited powers. More powers were granted later as the member states gained confidence in the federal government.

Accountability and Transparency

In order to make its activities more widely known and better understood, the United Nations ought to have its own television channel.

Such a network could produce an unbiased version of the news. It could broadcast documentary programs on global problems. It could produce programs showing viewers the music, art and literature of other cultures than their own. It could broadcast programs on the history of ideas, in which the contributions of many societies were adequately recognized.

At New Year, when people are in the mood to think of the past and the future, the Secretary General of the United Nations could broadcast a “State of the World” message, summarizing the events of the past year and looking forward to the new year, with its problems, and with his recommendations for their solution.

In order to reduce the danger of misuse of power, a bicameral legislature could be introduced, retaining the on-nation-one vote system in the General Assembly but introducing

a new legislative body where final votes would be taken by regions with roughly equal populations.

Giving the United Nations the powers of a federation

Many of the changes that we need to achieve a stable, sustainable and war-free world involve reform of the United Nations.

Our best hope for the future lies in changing the United Nations from a confederation into a federation.

The federation would be a limited union, where the federal government would have the power to make laws binding on individuals, but where the laws would be confined to interstate matters, with all powers not expressly delegated to the federal government retained by the individual states. In other words, in a federation each of the member states runs its own internal affairs according to its own laws and customs; but in certain agreed-on matters, where the interests of the states overlap, authority is specifically delegated to the federal government.

History has shown that federations of states are stable and successful, while confederations, like our present United Nations, have always proved to be too weak.

Some examples of modern federations are Brazil, Australia, the United States, Russia, Switzerland and the European Union.

Successful federations have two key powers:

- The power to make and enforce laws which are binding on individuals.
- The power to impose taxes

In addition, it is very helpful if the federal government has greater military power than any of the member states. This is true of the United States and Russia, but it does not hold for the European Union.

The history of the Constitution of the United States is very interesting. In 1777, the member states formed a confederation (like the present United Nations), but this proved to be too weak. Then a group of leaders that included James Madison and Alexander Hamilton, urged that the Articles of Confederation of 1777 be replaced by a federal constitution.

In 1787, a Constitutional Convention was held in Philadelphia with the aim of drafting a new and stronger constitution. In the same year, Alexander Hamilton began to publish the Federalist Papers, a penetrating analysis of the problems of creating a workable government uniting a number of semi-independent states.

The key idea of the Federalist Papers is that the coercion of states is neither just nor feasible, and that a government uniting several states must function by acting on individuals. This central idea was incorporated into the Federal Constitution of the United States, which was adopted in 1788.

The International Criminal Court

In 1998, in Rome, representatives of 120 countries signed a statute establishing the International Criminal Court, with jurisdiction over the crime of genocide, crimes against humanity, war crimes, and the crime of aggression.

Four years were to pass before the necessary ratifications were gathered, but by Thursday, April 11, 2002, 66 nations had ratified the Rome agreement, 6 more than the 60 needed to make the court permanent.

It would be impossible to overstate the importance of the International Criminal Court. At last, international law acting on individuals has become a reality! The only effective and just way that international laws can act is to make individuals responsible and punishable.

Although the ICC is in place, it has the defect that since it is opposed by powerful states, it functions very imperfectly. Nevertheless, we can hope that with the passage of time, world public opinion will demand that the ICC become more impartial. We can also hope that the range of crimes under its jurisdiction will be extended.

The Nuclear Weapons Convention

On July 7, 2017, a treaty banning nuclear weapons was adopted by an overwhelming majority at the United Nations General Assembly.¹ Although opposed by all of the nuclear weapon states, the treaty is a great achievement. Here are the first few articles:

Article 1: Prohibitions

1. Each State Party undertakes never under any circumstances to:
 - (a) Develop, test, produce, manufacture, otherwise acquire, possess, or stockpile nuclear weapons or other nuclear explosive devices.
 - (b) Transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices, directly or indirectly.
 - (c) Receive the transfer of or control over nuclear weapons or other nuclear explosive devices directly or indirectly.
 - (d) Use or threaten to use nuclear weapons or other nuclear explosive devices.
 - (e) Assist, encourage, or induce, in any way, anyone to engage in any activity prohibited to a state party.

The Tobin tax

James Tobin, who was Sterling Professor of Economics at Yale University, and Nobel Laureate in Economics, proposed that international currency transactions be taxed at a

¹<https://www.un.org/disarmament/ptnw/>
<http://www.abolition2000.org/en/>

small fraction of a percent. He believed that even this extremely small tax would make exchange rates much more stable. When asked what should be done with the proceeds of the tax, Tobin added, almost as an afterthought, "Give it to the United Nations".

In fact, the volume of international currency transactions is so enormous that even the tiny tax proposed by Tobin would be sufficient to solve all the UN's financial problems.

In 2016, China drafted rules to impose a genuine currency transaction tax and this was referred to in financial press as a Tobin tax. The 2016 Democratic Party presidential candidate, Hillary Clinton, also favored a small tax on international currency transactions. However, the United States has consistently opposed the idea of giving the proceeds to the United Nations.

Links between poverty and war

The eradication of war as an institution will require that the United Nations be strengthened, that it be given the power of taxation, the power to make laws that are binding on individuals, and a reformed and democratic voting system. These reforms are likely to be opposed by the wealthy part of the world, because rich countries do not wish to give up their present advantages of power and wealth. For example, the wealthy nations may fear that if the United Nations had the power to impose taxes, the result would be a transfer of money from themselves to the poorer parts of the world.

From this discussion we can see that the problem of eliminating the institution of war by reforming and strengthening the United Nations is closely related to the problem of eliminating the intolerable economic inequality that characterizes the world today. The two problems must be addressed together.

Governments of large nations compared with global governance

The problem of achieving internal peace over a large geographical area is not insoluble. It has already been solved.

There exist today many nations or regions within each of which there is internal peace, and some of these are so large that they are almost worlds in themselves. One thinks of China, India, Brazil, Australia, the Russian Federation, the United States, and the European Union. Many of these enormous societies contain a variety of ethnic groups, a variety of religions and a variety of languages, as well as striking contrasts between wealth and poverty.

If these great land areas have been forged into peaceful and cooperative societies, cannot the same methods of government be applied globally?

Today there is a pressing need to enlarge the size of the political unit from the nation-state to the entire world. The need to do so results from the terrible dangers of modern weapons and from global economic interdependence.

The progress of science has created this need, but science has also given us the means to enlarge the political unit: Our almost miraculous modern communications media, if

properly used, have the power to weld all of humankind into a single supportive and cooperative society.

Suggestions for further reading

1. Q. Wright, *A Study of War*, Chicago University Press, (1965).
2. M. Kahnert et al., editors, *Children and War*, Peace Union of Finland, (1983).
3. N.A. Guenther, *Children and the Threat of Nuclear War: An Annotated Bibliography*, Compubibs, New York, New York, (1985).
4. D.V. Babst et al, *Accidental Nuclear War: The Growing Peril*, Dundas, Ontario, Peace Research Institute, (1984).
5. J. Schear, editor, *Nuclear Weapons Proliferation and Nuclear Risk*, Gower, London, (1984).
6. E. Chivian et al., editors, (International Physicians for the Prevention of Nuclear War), *Last Aid: The Medical Dimensions of Nuclear War*, W.H. Freeman, San Francisco, (1982).
7. H. Mahler, *World Health is Indivisible*, World Health Organization, Geneva, (1978).
8. E. Kamenka, editor, *Nationalism*, Edward Arnold, London, (1976).
9. Elie Kedourie, *Nationalism in Asia and Africa*, Frank Cass and Company Ltd., London, (1970).
10. S. Freud, *Warum Krieg? Das Bild vom Feind*, Arbeitsgem. Friedenspädagogik, (1983).
11. R.A. Levine and D.T. Campbell, *Ethnocentrism: Theories of Conflict, Ethnic Attitudes and Group Behavior*, Wiley, New York, (1972).
12. R.A. Hinde, *Biological Basis of Human Social Behavior*, McGraw-Hill, (1977).
13. R.A. Hinde, *Towards Understanding Human Relationships*, Academic Press, London, (1979).
14. C. Zahn-Waxler, *Altruism and Aggression: Biological and Social Origins*, Cambridge University Press, (1986).
15. R. Axelrod, *The Evolution of Cooperation*, Basic Books, New York, (1984).
16. Arthur Koestler, *The Urge to Self-Destruction*, in *The Place of Values in a World of Facts*, A. Tiselius and S. Nielsson editors, Wiley, New York, (1970).
17. Edith Wynner, *World Federal Government in Maximum Terms: Proposals for United Nations Charter Revision*, Fedonat Press, Afton New York, (1954).
18. Stockholm International Peace Research Institute, *SIPRI Military Expenditure Database*, (2017).
19. United States Census Bureau, *International Database, World Population*, (2016).
20. Stockholm International Peace Research Institute, *SIPRI Arms Transfers Database*, (2017).
21. R.E. Black, et al., *Maternal and child undernutrition and overweight in low-income and middle-income countries.*, *The Lancet*, **382** (9890), pp. 427-451, doi:10.1016/S0140-6736(13)60937-X, (2013).

22. L. Lui, et al., *Global, regional, and national causes of child mortality: an updated systematic analysis for 2010 with time trends since 2000*, The Lancet, **379** (9832), pp. 2151-2161 doi:10.1016/S0140-6736(12)60560-1, (2012).
Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015 Vos, Theo et al.
23. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators, *Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015*, The Lancet, **388** (10053) pp. 1545-1602, doi:10.1016/S0140-6736(16)31678-6, (2016).
24. A. Fenwick, *The global burden of neglected tropical diseases*, Public Health, **126** (3), pp. 233-236, 10.1016/j.puhe.2011.11.015, (2012).
25. UN-OHRLLS Representatives for the Least Developed Countries, *UN LDC fact sheet*, <http://unohrlls.org/custom-content/uploads/2013/09/LDC-Factsheet-2013.pdf>.
26. Unesco Institute of Statistics, Literacy: <http://uis.unesco.org/en/topic/literacy>
27. Critchley and Bruinjeel, Unesco, *Environmental Impacts of Converting Moist Tropical Forest to Agriculture and Plantations*, IHP Humid Tropics Programme Series no. 10, (1996).
28. J. Buxton, *Drug Crop Production, Poverty, and Development*, Open Society Foundations (2016).
29. United Nations Office on Drugs and Crime, *World Drug Report, (2014)*.
30. B. Broms, *United Nations*, Suomalainen Tiedeakatemia, Helsinki, (1990).
31. R.A. Akindale, *The Organization and Promotion of World Peace: A Study of Universal-Regional Relationships*, Univ. Toronto Press, Toronto, Ont., (1976).
32. N. Ball and T. Halevy, *Making Peace Work: The Role of the International Development Community*, Overseas Development Council, Washington DC, (1996).
33. Alexander.Hamilton, James Madison and John Jay, *The Federalist Papers*, (1787-1788), Project Gutenberg.
34. Edith Wynner, *World Federal Government in Maximum Terms: Proposals for United Nations Charter Revision*, New York: Fedonat Press, (1954).
35. Grenville Clark and Louis B. Sohn (1958). *World Peace Through World Law*, Cambridge: Harvard University Press.
36. Bertrand Russell, *Has Man A Future?*, Hammondsworth: Penguin, (1961).
37. United Nations General Assembly, *Principles of International Law Recognized in the Charter of the Nuremberg Tribunal and in the Judgment of the Tribunal*, (1950).
38. Sydney Bailey, *The Procedure of the Security Council*, Oxford: Clarendon Press, (1998).
39. R.A. Akindale, *The Organization and Promotion of World Peace: A Study of Universal-Regional Relationships*, Toronto: University of Toronto Press, (1976).
40. J.S. Applegate, (1992). *The UN Peace Imperative*, New York: Vantage Press, (1988).
41. S.E. Atkins, *Arms Control, Disarmament, International Security and Peace: An Annotated Guide to Sources*, Santa Barbara: Clio Press, (1980-1987).

42. N. Ball, and T. Halevy, *Making Peace Work: The Role of the International Development Community*, Washington D.C.: Overseas Development Council, (1996).
43. J.H. Barton, *The Politics of Peace: An Evaluation of Arms Control*, Stanford: Stanford University Press, (1981).
44. A. Boserup and A. Mack, *Abolishing War: Cultures and Institutions; Dialogue with Peace Scholars Elise Boulding and Randall Forsberg*, Cambridge: Boston Research Center for the Twenty first Century, (1998).
45. Elise Boulding et al. Eds., *Peace, Culture and Society: Transnational Research Dialogue*, Boulder: Westview Press, (1991).
46. J. D'Arcy and D. Harris, *The Procedural Aspects of International Law (Book Series), Volume 25*, Transnational Publishers, Ardsley, New York, (2001).
47. Shabtai Rosenne, *The Law and Practice at the International Court*, Leiden:Dordrecht, (1985).
48. Shabtai Rosenne, *The World Court - What It Is and How It Works*, Leiden: Dordrecht, (1995).
49. J. D'Arcy and D. Harris, *The Procedural Aspects of International Law Volume 25 (Book Series)*, New York: Transnational Publishers, (2001).
50. H. Cullen, *The Collective Complaints Mechanism Under the European Social Charter*, European Law Review, Human Rights Survey no.25: 18-30, (2000).
51. United Nations, *Conference to Negotiate a Legally Binding Instrument to Prohibit Nuclear Weapons*, (Treaty adopted on 7 July, 2017).
52. J. Tobin, *A Proposal for International Monetary Reform*. Eastern Economic Journal. Eastern Economic Association: pp. 153-159, (1978).
53. OXFAM, *Working for the Few: Political capture and economic inequality*, <http://www.oxfam.org/en/few>
54. Muhammad Yunus, *Banker to the Poor; Microcredit and the Battle Against World Poverty*, (2003).
55. UN Millennium Development Goals <http://www.un.org/millenniumgoals/> (2007).
56. Amartya Sen, *Poverty and Famine; An Essay on Entitlement and Deprivation*, Oxford University Press, (1981).
57. Amartya Sen, *Development as Freedom*, Oxford University Press, (1999).
58. Amartya Sen, *Inequality Reexamined*, Harvard University Press, (1992).
59. Paul F. Knitter and Chandra Muzaffar, editors, *Subverting Greed; Religious Perspectives on the Global Economy*, Orbis Books, Maryknoll, New York, (2002).
60. International Commission on Peace and Food. *Uncommon Opportunities: An Agenda for Peace and Equitable Development 2nd Edition*, New Jersey: Zed Books, (2004).
61. Michael Klare, *Resource Wars: The New Landscape of Global Conflict*, New York: Owl Books, (2002).
62. Michael Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy*, New York: Henry Holt and Company, (2008).
63. Michael Klare, *The Race for What's Left: The Global Scramble for the World's Last Resources*, New York: Metropolitan Books, (2012).

64. D. Feldman, et al., *Photovoltaic System Pricing Trends: Historical, Recent, and Near-Term Projections*, U.S. Department of Energy, NREL/PR-6A20-64898, (2015).
65. A. Baranus and D. Grionyte, *Measuring Fossil Fuel Subsidies*, ECFIN Economic Brief, Issue 40, doi:10.2765/85991, European Commission (2015).
66. British Petroleum Company, *B.P. Statistical Review of World Energy*, London: British Petroleum Company, (1991).
67. David Wasdell, *Arctic Dynamics*, Envisionation <http://www.envisionation.co.uk/index.php/videos/arctic-dynamics>
68. A. Gore, *An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do About It*, Rodale Books, New York, (2006).
69. A. Gore, *Earth in the Balance: Forging a New Common Purpose*, Earthscan, (1992).
70. M.K. Hubbert, *Energy Resources*, in *Resources and Man: A Study and Recommendations*, Committee on Resources and Man, National Academy of Sciences, National Research Council, W.H. Freeman, San Francisco, (1969).
71. G. Boyle (editor), *Renewable Energy: Power for a Sustainable Future, Second Edition*, Oxford University Press, (2004).
72. G. Boyle, B. Everett and J. Ramage (editors), *Energy Systems and Sustainability*, Oxford University Press, (2003).
73. United Nations Development Programme, *World Energy Assessment*, United Nations, New York, (2002).
74. P. Smith et al., *Meeting Europe's Climate Change Commitments: Quantitative Estimates of the Potential for Carbon Mitigation by Agriculture*, *Global Change Biology*, **6**, 525-39, (2000).
75. IPCC, Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis*, (1001).
76. D. King, *Climate Change Science: Adapt, Mitigate or Ignore*, *Science*, **303** (5655), pp. 176-177, (2004).
77. S. Connor, *Global Warming Past Point of No Return*, *The Independent*, (116 September, 2005).
78. D. Rind, *Drying Out the Tropics*, *New Scientist* (6 May, 1995).
79. J. Patz et al., *Impact of Regional Climate Change on Human Health*, *Nature*, (17 November, 2005).
80. L.R. Brown, *The Twenty-Ninth Day*, W.W. Norton, New York, (1978).
81. L.R. Brown et al., *The Great Transition*, Earth Policy Institute, (2016).
82. World Bank, *Climate Change Report Warns of Dramatically Warmer World This Century*, <http://www.worldbank.org/en/news/feature/2012/11/18/Climate-change-report-warns-dramatically-warmer-world-this-century>
83. Food and Agriculture Organization of the United Nations (FAO), *The State of Food Insecurity in the World*, (2015).
84. T. R. Malthus, *An Essay on the Principle of Population as it Affects the Future Improvement of Society, with Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Other Writers* London: Johnsons, (1798). (Obtainable in an Oxford World's Classics reprint).

85. T.R. Malthus, *An Essay on the Principle of Population, or, A View of its Past and Present Effects on Human Happiness, with an Inquiry into our Prospects Respecting its Future Removal or Mitigation of the Evils which it Occasions* 2nd edn. (London: Johnsons, (1803). (Obtainable from Everyman's University Library, J.M. Dent, London).
86. John Fielden, *The Curse of the Factory System*, London : A. Cobbett, (1836).
87. Charles Knowlton, *The Fruits of Philosophy, or The Private Companion of Young Married People*, London : J. Watson, (1845).
88. M.J. Daunton, *Progress and Poverty: An Economic and Social History of Britain, 1700-1850*, Oxford: Oxford University Press, (1990).
89. P.A. Brown, *The French Revolution in English History* 2nd edn. London: Allen and Unwin, (1923).
90. J.B. Bury, *The Idea of Progress*, New York: MacMillan, (1932).
91. W. Hazlitt, *A Reply to the Essay on Population by the Rev. T.R. Malthus*, London: Longman, Hurst, Rees and Orme, (1807).
92. R. Heilbroner, *The Worldly Philosophers: The Lives, Times and Ideas of the Great Economic Thinkers* 5th edn., New York: Simon and Schuster, (1980).
93. J. Avery, *Progress, Poverty and Population: Rereading Condorcet, Godwin and Malthus*, London: Frank Cass, (1997).
94. M. Giampietro and D. Pimental, *The Tightening Conflict: Population, Energy Use and the Ecology of Agriculture*, in *Negative Population Forum* L. Grant ed., Negative Population Growth, Inc. New Jersey: Teaneck, (1993).
95. L.R. Brown, *Full Planet, Empty Plates*, New York: W.W. Norton, (2012).
96. A. Peccei, *The Human Quality*, Pergamon Press, Oxford, (1977).
97. A. Peccei, *One Hundred Pages for the Future*, Pergamon Press, New York, (1977).
98. E. Pestel, *Beyond the Limits to Growth*, Universe Books, New York, (1989).
99. Frederick Soddy, *Wealth, virtual wealth and debt: The solution of the economic paradox*, Sydney: Allen and Unwin, (1926).
100. Frederick Soddy, *The Role of Money*, London: George Routledge and Sons Ltd, (1934).
101. Nicholas Georgescu-Roegen, *The Entropy Law and the Economic Process*, Cambridge: Harvard University Press, (1971).
102. Michael Rowbotham, *The Grip of Death: A Study of Modern Money, Debt Slavery and Destructive Economics*, Oxfordshire: Jon Carpenter Publishing, (1998).
103. Herman Daly and Joshua Farley, *Ecological Economics: Principles and Applications*, Washington, D.C: Island Press, (2004).
104. Herman Daly, *Beyond Growth: The Economics of Sustainable Development*, Boston: Beacon Press, (1997).
105. Herman Daly, *Valuing the Earth: Economics, Ecology, Ethics* Cambridge: The MIT Press, (1993).
106. Herman Daly and John Cobb, Jr., *For The Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future*, Boston: Beacon Press, (1994).

107. Robert Goodland, Herman Daly and Salah El Serafy, *Population, Technology, and Lifestyle: The Transition To Sustainability*, Washington, D.C: Island Press, (1992).
108. Richard Heinberg, *The End of Growth*, Gabriola Island BC: New Society Publishers, (2011).
109. Richard Florida, *The Rise of the Creative Class*, New York: Basic Books, (2002).
110. Robert Goodland et al., eds., *Environmentally Sustainable Economic Development: Building on Brundtland*, Paris: UNESCO, (1991).
111. Donella Meadows, Dennis Meadows and Jorgen Randers, *Beyond the Limits*, Vermont: Chelsea Green Publishing Co., (1992).
112. Peter Vitousek et al., *Human Appropriation of the Products of Photosynthesis*, *Bio-science* **34**, no.6 (1986): 368-373.
113. World Resources Institute (WRI), *Global Biodiversity Strategy, The World Conservation Union (IUCN), United Nations Environment Programme (UNEP)*, Washington D.C.: WRI, (1992).
114. Herman Daly, *Steady-State Economics: Second Edition with New Essays*, Island Press, (1991).
115. Herman Daly, *Economics in a Full World*, *Scientific American*, Vol. 293, Issue 3, September, (2005).
116. Herman Daly and John Cobb, *For the Common Good*, Beacon Press, Boston, (1989).
117. Joseph Rotblat, *Nobel Peace Prize Lecture 1996*, Norwegian Nobel Institute, (1995).
118. Pope Francis I, *Laudato si'*, <https://laudatosi.com/watch>
119. László Szombatfalvy, *The Greatest Challenges of Our Time*, Stockholm, Ekerlids Forlag, (2010).
120. Lester R. Brown et. al., *Saving the Planet. How to Shape an Environmentally Sustainable Global Economy*, W.W. Norton, New York, (1991).
121. Luther Standing Bear, *Land of the Spotted Eagle*, Houghton Mifflin, (1933).
122. T. Gyatso, HH the Dalai Lama, *Ancient Wisdom, Modern World: Ethics for the New Millennium*, Abacus, London, (1999).
123. T. Gyatso, HH the Dalai Lama, *How to Expand Love: Widening the Circle of Loving Relationships*, Atria Books, (2005).
124. J. Rotblat and D. Ikeda, *A Quest for Global Peace*, I.B. Tauris, London, (2007).
125. M. Gorbachev and D. Ikeda, *Moral Lessons of the Twentieth Century*, I.B. Tauris, London, (2005).
126. D. Krieger and D. Ikeda, *Choose Hope*, Middleway Press, Santa Monica CA 90401, (2002).
127. P.F. Knitter and C. Muzaffar, eds., *Subverting Greed: Religious Perspectives on the Global Economy*, Orbis Books, Maryknoll, New York, (2002).
128. S. du Boulay, *Tutu: Voice of the Voiceless*, Eerdmans, (1988).
129. Earth Charter Initiative *The Earth Charter*, www.earthcharter.org
130. P.B. Corcoran, ed., *The Earth Charter in Action*, KIT Publishers, Amsterdam, (2005).
131. E.O. Wilson, *The Diversity of Life*, Allen Lane, The Penguin Press, (1992).

132. Paul Hawken *The Ecology of Commerce; A Declaration of Sustainability*, Collins Business, (2005).
133. R. Costanza, ed., *Ecological Economics: The Science and Management of Sustainability*, Colombia University Press, New York, (1991).
134. Edy Korthals Altes, *The Contribution of Religions to a Just and Sustainable Economic Development*, in F. David Peat, editor, *The Pari Dialogues, Volume 1*, Pari Publishing, (2007).
135. Edward Wilson, ed., *Biodiversity* Washington D.C., National Academy Press, (1988).

Â

Chapter 12

FEDERALISM AND GLOBAL GOVERNANCE

“To coerce the states is one of the maddest projects that was ever devised... 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.” Alexander Hamilton, 1787

12.1 A personal note

I have been a World Federalist ever since 1954. Sixty-four years ago, I graduated from MIT and went on to do postgraduate work in theoretical physics at the University of Chicago. At that time, my political opinions were not very different from those of my parents, who were Eisenhower-supporting Republicans. I was very much against the institution of war, and in favor of world government. However, I thought that the establishment of a world authority would have to wait until most of the the member states had decent governments.

At the University of Chicago, the general atmosphere was quite liberal, and I may have been influenced by it. But what really changed my mind was hearing a speech by a World Federalist named Vernon Nash. Besides convincing me that a world government ought to be a federation, he also made me see that if we waited until all the member states had governments of which we could approve, we would have waited too long. We need global governance precisely because of faults in the governments of the nations of the world.

Vernon Nash had once been in favor of abolishing the United Nations and starting again from scratch with a World Constitutional Convention. He had justified this position by saying “No one has ever got across a ditch of any size in two jumps”. However, other World Federalists had later made him see how impractical his position was, and he finally agreed that gradual reform of the UN was the best way to go forward.

After studying the writings of the World Federalists, I reached beliefs that are very close to the ones that I hold today. I recently expressed these ideas in an article in *Cadmus*, a journal of the World Academy of Art and Science. You can find the article by typing

“John Scales Avery, Cadmus” into a search engine.

But what are the reforms that are needed? After the horrors of World War II, the United Nations was founded to eliminate the institution of war. However, the UN Charter drafted in 1945 was far too weak to achieve this goal because it was a confederation rather than a federation. This was very similar to what happened during the early history of the United States: First a confederation was tried, but it soon proved to be too weak, and it was replaced by the present US federal constitution. The debates that occurred at that time are very relevant to UN reform today.

George Mason, one of the architects of the federal constitution of the United States, believed that “such a government was necessary as could directly operate on individuals, and would punish those only whose guilt required it”, while James Madison (another drafter of the U.S. federal constitution) remarked that the more he reflected on the use of force, the more he doubted “the practicability, 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 a 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.”)

Other reforms are also needed: If the UN is to become an effective World Federation, it will need a reliable source of income to make the organization less dependent on wealthy countries, which tend to give support only to those interventions of which they approve. A promising solution to this problem is the so-called “Tobin tax”, named after the Nobel-laureate economist James Tobin of Yale University. Tobin proposed that international currency exchanges should be taxed at a rate between 0.1 and 0.25 percent. He believed that even this extremely low rate of taxation would have the beneficial effect of damping speculative transactions, thus stabilizing the rates of exchange between currencies. When asked what should be done with the proceeds of the tax, Tobin said, almost as an afterthought, “Let the United Nations have it.”

The volume of money involved in international currency transactions is so enormous that even the tiny tax proposed by Tobin would provide the United Nations with between 100 billion and 300 billion dollars annually. By strengthening the activities of various UN agencies, the additional income would add to the prestige of the United Nations and thus make the organization more effective when it is called upon to resolve international political conflicts.

The budgets of UN agencies, such as the World Health Organization, the Food and



Figure 12.1: Alexander Hamilton believed that “To coerce the states is one of the maddest projects that was ever devised.”



Figure 12.2: James Tobin. When asked what should be done with the proceeds of the tax, Tobin said, almost as an afterthought, “Let the United Nations have it.”

Agricultural Organization, UNESCO and the UN Development Programme, should not just be doubled but should be multiplied by a factor of at least fifty. With increased budgets the UN agencies could sponsor research and other actions aimed at solving the world's most pressing problems - AIDS, drug-resistant infections diseases, tropical diseases, food insufficiencies, pollution, climate change, alternative energy strategies, population stabilization, peace education, as well as combating poverty, malnutrition, illiteracy, lack of safe water and so on. Scientists would be less tempted to find jobs with arms-related industries if offered the chance to work on idealistic projects. The United Nations could be given its own television channel, with unbiased news programs, cultural programs, and "State of the World" addresses by the UN Secretary General.

In addition, the voting system of the United Nations General Assembly needs to be reformed, and the veto power in the Security Council need to be abolished (or alternatively, the Security Council could be abolished).

So in 1954, convinced that war could only be eliminated by making the United Nations into a federation, I became an active World Federalist. In fact, during my stay at the University of Chicago, I became the Membership Chairman for the Chicago Area for the World Association of World Federalists.

12.2 Strengthening the United Nations

It is becoming increasingly clear that the concept of the absolutely sovereign nation-state is a dangerous anachronism in a world of thermonuclear weapons, instantaneous communication, and economic interdependence. Probably our best hope for the future lies in developing the United Nations into a World Federation. The strengthened United Nations should have a legislature with the power to make laws that are binding on individuals, and the ability to arrest and try individual political leaders for violations of these laws. The world federation should also have the power of taxation, and the military and legal powers necessary to guarantee the human rights of ethnic minorities within nations.

In 1945, the victors of World War II gathered in San Francisco to draft the United Nations Charter. The tragic experiences of two world wars, during which the lives of 26 million soldiers and 64 million civilians were lost, had convinced them that security based on national military forces must be replaced by a system of collective security. The first paragraph of the Charter states that the primary purpose of the organization is "to maintain international peace and security, and to that end to take effective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression and other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace."

In practice, the United Nations has developed several effective modes of action - peace-keeping, peacemaking, peacebuilding, preventative diplomacy and peace enforcement. Even though the organization has been hampered by Cold War tensions and frequently paralyzed by vetos in the Security Council, it nevertheless has made substantial contributions

to global peace by resolving small-scale conflicts and by preventing large-scale ones. The term peacekeeping, in its narrow sense, is applied to operations where U.N. military personnel, often unarmed or only lightly armed, form a buffer between hostile forces in order to maintain a cease-fire. Peacemaking refers to U.N. assistance in the settlement of disputes or the resolution of conflicts.

The term peacebuilding was coined in recent years, and it denotes broad and fundamental efforts to create global conditions which promote peace. Thus peacebuilding includes all areas of international cooperation, including economic, social and humanitarian concerns. For example, U.N. action on problems of poverty, population, pollution, human rights, and the control of terrorism, narcotics and infectious disease all come under the heading of peacebuilding. In addition, the U.N. sometimes acts through preventative diplomacy, an example being the Secretary-General's recent negotiation of an agreement on arms inspection in Iraq. The term peace enforcement denotes active military intervention by the United Nations to stop aggression of one nation against another, for example in the Korean War or the Gulf War. During the half century which has passed since the founding of the United Nations, the need for effective government at the global level has greatly increased. Modern weapons have become so destructive that war is no longer an acceptable method for resolving international disputes. For this reason, and because of the enormous increase in global economic interdependence, we can no longer afford to have unlimited national sovereignty, with anarchy at the global level.

We can clearly see that in the long run, security can only be achieved by an effective system of international law. The United Nations is the only institution whose authority and structure are suited to constructing and enforcing such a system of law at the global level. U.N. membership includes all nations; and the U.N. has had half a century of experience in addressing global problems.

The impartiality and neutrality of the Secretary-General are accepted and recognized, whereas regional organizations such as NATO cannot claim the same degree of impartiality. Thus it is urgent that the present U.N. Charter be made to function more justly and more effectively; and in the long run, the weaknesses of the present U.N. Charter must be corrected.

There are numerous reasons why, during the coming century, war must be abolished as a social institution; and a few of these reasons are as follows: It is extremely important that research funds be used to develop renewable energy sources and to solve other urgent problems now facing humankind, rather than for developing new and more dangerous weapons systems. In spite of the end of the Cold War, the world still spends roughly 1.7 trillion U.S. dollars per year on armaments. At present, more than 40 percent of all research funds are used for projects related to the arms industry.

Since the Second World War, in spite of the best efforts of the U.N., there have been over 150 armed conflicts; and on any given day, there are an average of 12 wars somewhere in the world. While in earlier epochs it may have been possible to confine the effects of war mainly to combatants, in recent decades the victims of war have increasingly been civilians, and especially children.

Civilian casualties often occur through malnutrition and through diseases which would

be preventable in normal circumstances. Because of the social disruption caused by war, normal supplies of food, safe water and medicine are interrupted, so that populations become vulnerable to famine and epidemics. In the event of a nuclear war, starvation and disease would add greatly to the loss of life caused by the direct effects of nuclear weapons.

The indirect effects of war and the threat of war are also enormous. For example, the World Health Organization lacks funds to carry through an antimalarial programme on as large a scale as would be desirable; but the entire programme could be financed for less than the world spends on armaments in a single day. Five hours of world arms spending is equivalent to the total cost of the 20-year WHO programme which resulted, in 1979, in the eradication of smallpox. With a diversion of funds consumed by three weeks of the military expenditures, the world could create a sanitary water supply for all its people, thus eliminating the cause of more than half of all human illness.

It is often said that we are economically dependent on war-related industries; but if this is so, it is a most unhealthy dependence, analogous to drug-dependence or alcoholism. From a purely economic point of view, it is clearly better to invest in education, roads, railways, reforestation, retooling of factories, development of disease-resistant high-yield wheat varieties, industrial research, research on utilization of solar and geothermal energy, and other elements of future-oriented economic infrastructure, rather than building enormously costly warplanes and other weapons. At worst, the weapons will contribute to the destruction of civilization. At best, they will become obsolete in a few years and will be scrapped. By contrast, investment in future-oriented infrastructure can be expected to yield economic benefits over a long period of time.

It is instructive to consider the example of Japan and of Germany, whose military expenditures were severely restricted after World War II. The impressive post-war development of these two nations can very probably be attributed to the restrictions on military spending which were imposed on them by the peace treaty.

As bad as conventional arms and conventional weapons may be, it is the possibility of a nuclear war that still poses the greatest threat to humanity. One argument that has been used in favor of nuclear weapons is that no sane political leader would employ them. However, the concept of deterrence ignores the possibility of war by accident or miscalculation, a danger that has been increased by nuclear proliferation and by the use of computers with very quick reaction times to control weapons systems.

With the end of the Cold War, the danger of a nuclear war between superpowers has diminished; but because of nuclear proliferation, there is still a substantial danger of such a war in the Middle East or in the India- Pakistan dispute, as well as the danger of nuclear blackmail by terrorists or political fanatics.

Recent nuclear power plant accidents remind us that accidents frequently happen through human and technical failure, even for systems which are considered to be very "safe". We must also remember the time scale of the problem. To assure the future of humanity, nuclear catastrophe must be avoided year after year and decade after decade. In the long run, the safety of civilization cannot be achieved except by the abolition of nuclear weapons, and ultimately the abolition of the institution of war.

In the long run, because of the terrible weapons which have been produced through the misuse of science, and because of the even more destructive weapons which are likely to be devised in the future, the only way that we can insure the survival of civilization is to abolish war as an institution. It seems likely that achievement of this goal will require revision and strengthening of the United Nations Charter. The Charter should not be thought of as cast in concrete for all time. It needs instead to grow with the requirements of our increasingly interdependent global society. We should remember that the Charter was drafted and signed before the first nuclear bomb was dropped on Hiroshima; and it also could not anticipate the extraordinary development of international trade and communication which characterizes the world today. Among the weaknesses of the present U.N. Charter is the fact that it does not give the United Nations the power to make laws which are binding on individuals. At present, in international law, we treat nations as though they were persons: We punish entire nations by sanctions when the law is broken, even when only the leaders are guilty, even though the burdens of the sanctions fall most heavily on the poorest and least guilty of the citizens, and even though sanctions often have the effect of uniting the citizens of a country behind the guilty leaders. To be effective, the United Nations needs a legislature with the power to make laws which are binding on individuals, and the power to arrest individual political leaders for flagrant violations of international law.

Another weakness of the present United Nations Charter is the principle of "one nation one vote" in the General Assembly. This principle seems to establish equality between nations, but in fact it is very unfair: For example it gives a citizen of China or India less than a thousandth the voting power of a citizen of Malta or Iceland. A reform of the voting system is clearly needed.

The present United Nations Charter contains guarantees of human rights, but there is no effective mechanism for enforcing these guarantees. In fact there is a conflict between the parts of the Charter protecting human rights and the concept of absolute national sovereignty. Recent history has given us many examples of atrocities committed against ethnic minorities by leaders of nation-states, who claim that sovereignty gives them the right to run their internal affairs as they wish, free from outside interference.

One feels that it ought to be the responsibility of the international community to prevent gross violations of human rights, such as the use of poison gas against civilians (to mention only one of the more recent political crimes); and if this is in conflict with the notion of absolute national sovereignty, then sovereignty must yield. In fact, the concept of the absolutely sovereign nation-state as the the supreme political entity is already being eroded by the overriding need for international law. Recently, for example, the Parliament of Great Britain, one of the oldest national parliaments, acknowledged that laws made by the European Community take precedence over English common law.

Today the development of technology has made global communication almost instantaneous. We sit in our living rooms and watch, via satellite, events taking place on the opposite side of the globe. Likewise the growth of world trade has brought distant countries into close economic contact with each other: Financial tremors in Tokyo can shake New York. The impact of contemporary science and technology on transportation and communication has effectively abolished distance in relations between nations. This close

contact and interdependence will increasingly require effective international law to prevent conflicts. However, the need for international law must be balanced against the desirability of local self-government. Like biological diversity, the cultural diversity of humankind is a treasure to be carefully guarded. A balance or compromise between these two desirable goals could be achieved by granting only a few carefully chosen powers to a strengthened United Nations with sovereignty over all other issues retained by the member states.

The United Nations has a number of agencies, such as the World Health Organization, the Food and Agricultural Organization, and UNESCO, whose global services give the UN considerable prestige and de facto power. The effectiveness of the UN as a global authority could be further increased by giving these agencies much larger budgets. In order to do this, and at the same time to promote the shift from fossil fuels to renewable energy sources, it has been proposed that the U.N. be given the power to tax CO₂ emissions.

The amount of money which could thus be made available for constructive purposes is very large; and a slight increase in the prices of fossil fuels could make a number of renewable energy technologies economically competitive. It has also been proposed that the United Nations should be given the power to impose a small tax on international currency transactions. The amount of money involved in these transactions is so large that even a few hundredths of a percent in tax on each transaction would be sufficient to solve the financial problems of the United Nations. A United Nations tax on air travel has also been proposed.

The United Nations regular budget in 1992 amounted to 1.03 billion U.S. dollars. In addition, UNICEF, the U.N. Development Programme, and the World Food Programme used several billion dollars, but funds for these agencies were raised by voluntary contributions. Finally, in 1992, peacekeeping operations cost the U.N. 2.7 billion dollars. These sums seem very small when they are compared with the 1.7 trillion dollars which the world spends annually on armaments; and the reluctance of some nations to pay their dues to the U.N. seems shortsighted. It may be that the nations which starve the U.N. financially do so deliberately, in order to make the organization easier to control. They can then give financial support selectively to those interventions of which they approve. For this reason, the provision of a reliable income for the United Nations would have the effect of freeing it from undue influence by any nation, making it more impartial. Impartiality may prove to be the key factor required to give the U.N. the moral authority needed to settle disputes and to maintain peace with a minimum use of force.

The task of building a global political system which is in harmony with modern technology will require our best efforts, but it is not impossible. We can perhaps gain the courage needed for this task by thinking of the history of slavery. The institution of slavery was a part of human culture for so long that it was considered to be an inevitable consequence of human nature; but today slavery has been abolished almost everywhere in the world. The example of the dedicated men and women who worked to abolish slavery can give us courage to approach the even more important task which faces us today - the abolition of war.

12.3 The Success of Federations

Historically, the federal form of government has proved to be extremely robust and successful. Many of today's nations are federations of smaller, partially autonomous, member states. Among these nations are Argentina, Australia, Austria, Belgium, Brazil, Canada, Germany, India, Mexico, Russia, Spain, South Africa and the United States.

The Swiss Federation is an interesting example, because its regions speak three different languages: German, French and Italian. In 1291, citizens of Uri, Schwyz and Unterwalden, standing on the top of a small mountain called Rütli, swore allegiance to the first Swiss federation with the words "we will be a one and only nation of brothers". During the 14th century, Luzern, Zürich, Glarus, Zug and Bern also joined. Later additions during the 15th and 16th centuries included Fribourg, Solothurn, Basel, Schaffhausen and Appenzell. In 1648 Switzerland declared itself to be an independent nation, and in 1812, the Swiss Federation declared its neutrality. In 1815, the French-speaking regions Valais, Neuchatel and Genève were added, giving Switzerland its final boundaries.

In some ways, Switzerland is a very advanced democracy, and many issues are decided by the people of the cantons in direct referendums. On the other hand, Switzerland was very late in granting votes to women (1971), and it was only in 1990 that a Swiss federal court forced Appenzell Innerrhoden to comply with this ruling. Switzerland was also very late in joining the United Nations (10 September, 2002).

The Federal Constitution of United States of America is one of the most important and influential constitutions in history. It later formed a model for many other governments, especially in South America. The example of the United States is especially interesting because the original union of states formed by the Articles of Confederation in 1777 proved to be too weak, and it had to be replaced eleven years later by a federal constitution.

During the revolutionary war against England the 13 former colonies sent representatives to a Continental Congress, and on May 10, 1776, the Congress authorized each of the colonies to form its own local provincial government. On July 4, 1776 it published a formal Declaration of Independence. The following year, the Congress adopted the Articles of Confederation defining a government of the new United States of America. The revolutionary war continued until 1783, when the Treaty of Paris was signed by the combatants, ending the war and giving independence to the United States. However, the Articles of Confederation soon proved to be too weak. The main problem with the Articles was that laws of the Union acted on its member states rather than on individual citizens.

In 1787, a Constitutional Convention was held in Philadelphia with the aim of drafting a new and stronger constitution. In the same year, Alexander Hamilton began to publish the Federalist Papers, a penetrating analysis of the problems of creating a workable government uniting a number of semi-independent states. The key idea of the Federalist Papers is that the coercion of states is neither just nor feasible, and that a government uniting several states must function by acting on individuals. This central idea was incorporated into the Federal Constitution of the United States, which was adopted in 1788. Another important feature of the new Constitution was that legislative power was divided between the Senate, where the states had equal representation regardless of their size, and the

House of Representatives, where representation was proportional to the populations of the states. The functions of the executive, the legislature and the judiciary were separated in the Constitution, and in 1789 a Bill of Rights was added.

Because the states were initially distrustful of each other and jealous of their independence, the powers originally granted to the US federal government were minimal. However, as it evolved, the Federal Government of the United States gradually became stronger, and bit by bit it became involved in an increasingly wide range of activities.

The formation of the federal government of Australia is interesting because it illustrates the power of ordinary citizens to influence the large-scale course of events. In the 19th century, the six British colonies that were later to be welded into the Commonwealth of Australia imposed tariffs on each other, so that citizens living near the Murray River (for example) would have to stop and pay tolls each time they crossed the river. The tolls, together with disagreements over railways linking the colonies, control of river water and other common concerns, finally became so irritating that citizens' leagues sprang up everywhere to demand federation. By the 1890's such federation leagues could be found in cities and towns throughout the continent. In 1893, the citizens' leagues held a conference in Corowa, New South Wales, and proposed the "Corowa Plan", according to which a Constitutional Convention should be held. After this, the newly drafted constitution was to be put to a referendum in all of the colonies. This would be the first time in history that ordinary citizens would take part in the nation-building process. In January, 1895, the Corowa Plan was adopted by a meeting of Premiers in Hobart, and finally, despite the apathy and inaction of many politicians, the citizens had their way: The first Australian federal election was held March, 1901, and on May 9, 1901, the Federal Parliament of Australia opened. Australia was early in granting votes for women (1903). Its voting system has evolved gradually. Today there is a system of compulsory voting by citizens for both the Australian House of Representatives and the Australian Senate.

The successes and problems of the European Union provide invaluable experience as we consider the measures that will be needed to make the United Nations into a federation. On the whole, the EU has been an enormous success, demonstrating beyond question that it is possible to begin with a very limited special-purpose federation and to gradually expand it, judging at each stage whether the cautiously taken steps have been successful. The European Union has today made war between its member states virtually impossible. This goal, now achieved, was in fact the vision that inspired the leaders who initiated the European Coal and Steel Community in 1950.

The European Union is by no means without its critics or without problems, but, as we try to think of what is needed for United Nations reform, these criticisms and problems are just as valuable to us as are the successes of the EU.

Countries that have advanced legislation protecting the rights of workers or protecting the environment complain that their enlightened laws will be nullified if everything is reduced to the lowest common denominator in the EU. This complaint is a valid one, and two things can be said about it: Firstly, diversity is valuable, and therefore it may be undesirable to homogenize legislation, even if uniform rules make trade easier. Secondly, if certain rules are to be made uniform, it is the most enlightened environmental laws or

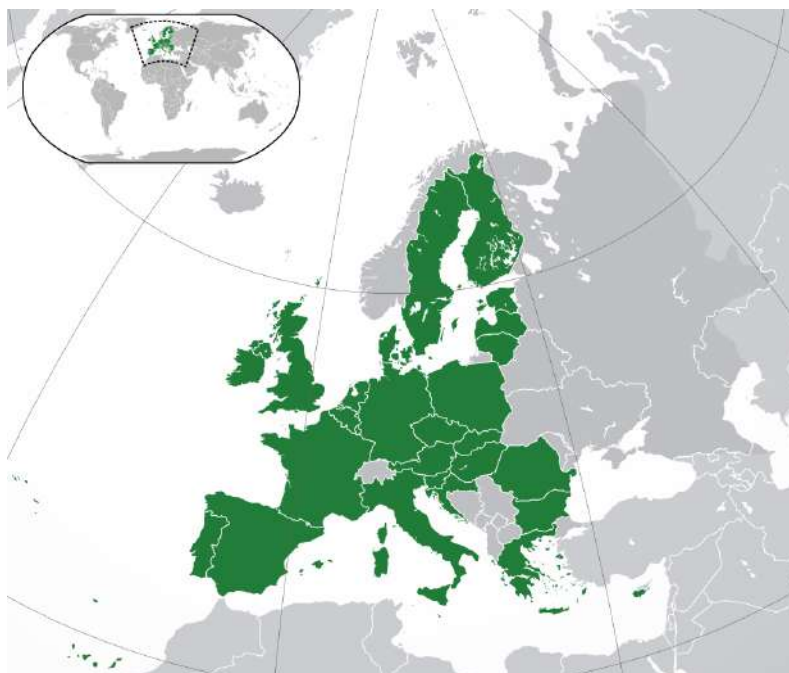


Figure 12.3: A map of the European Union. Existing federations like the EU can give us insights as we work to develop the United Nations into a federation.

labor laws that ought to be made the standard, rather than the least enlightened ones. Similar considerations would hold for a reformed and strengthened United Nations.

Another frequently heard complaint about the EU is that it takes decision-making far away from the voters, to a remote site where direct political will of the people can hardly be felt. This criticism is also very valid. Often, in practice, the EU has ignored or misunderstood one of the basic ideas of federalism: A federation is a compromise between the desirability of local self-government, balanced against the necessity of making central decisions on a few carefully selected issues.

As few issues as possible should taken to Bruxelles, but there are certain issues that are so intrinsically transnational in their implications that they must be decided centrally. This is the principle of subsidiarity, so essential for the proper operation of federations - local government whenever possible, and only a few central decisions when absolutely necessary. In applying the principle of subsidiarity to a world government of the future, one should also remember that UN reform will take us into new and uncharted territory. Therefore it is prudent to grant only a few carefully chosen powers, one at a time, to a reformed and strengthened UN, to see how these work, and then to cautiously grant other powers, always bearing in mind that wherever possible, local decisions are the best.

In the perspective of a longer time-frame, we need to work for a world where national armies will be very much reduced in size, where the United Nations will have a monopoly on heavy armaments, and where the manufacture or possession of nuclear weapons, as well as the export of arms and ammunition from industrialized countries to the developing

countries, will be prohibited. (See reference 3).

Looking towards the future, we can foresee a time when the United Nations will have the power to make and enforce international laws which are binding on individuals. Under such circumstances, true police action will be possible, incorporating all of the needed safeguards for lives and property of the innocent.

One can hope for a future world where public opinion will support international law to such an extent that a new Hitler or Saddam Hussein or a future Milosevic will not be able to organize large-scale resistance to arrest - a world where international law will be seen by all to be just, impartial and necessary - a well-governed global community within which each person will owe his or her ultimate loyalty to humanity as a whole.

The veto power in the Security Council must be eliminated

We should remember that the UN Charter was drafted and signed before the first nuclear bomb was dropped on Hiroshima; and it also could not anticipate the extraordinary development of international trade and communication which characterizes the world today. The five permanent members of the Security Council, China, France, Russia, the United Kingdom and the United States, were the victors of World War II, and were given special privileges by the Charter as it was established in 1945, among these the power to veto UN actions on security issues. In practice, the veto power of the P5 nations has made the UN ineffective, and it has become clear that changes are needed. If the Security Council is retained in a World Federation, the veto power must be eliminated.

Subsidiarity

The need for international law must be balanced against the desirability of local self-government. Like biological diversity, the cultural diversity of humankind is a treasure to be carefully guarded. A balance or compromise between these two desirable goals can be achieved by granting only a few carefully chosen powers to a World Federation with sovereignty over all other issues retained by the member states. This leaves us with a question: Which issues should be decided centrally, and which locally?

The present United Nations Charter contains guarantees of human rights, but there is no effective mechanism for enforcing these guarantees. In fact there is a conflict between the parts of the Charter protecting human rights and the concept of absolute national sovereignty. Recent history has given us many examples of atrocities committed against ethnic minorities by leaders of nation-states, who claim that sovereignty gives them the right to run their internal affairs as they wish, free from outside interference. One feels that it ought to be the responsibility of the international community to prevent gross violations of human rights, such as genocide; and if this is in conflict with the concept of national sovereignty, then sovereignty must yield.

In the future, overpopulation and famine are likely to become increasingly difficult and painful problems in several parts of the world. Since various cultures take widely different attitudes towards birth control and family size, the problem of population stabilization

seems to be one which should be decided locally. At the same time, aid for local family planning programs, as well as famine relief, might appropriately come from global agencies, such as WHO and FAO. With respect to large-scale migration, it would be unfair for a country which has successfully stabilized its own population, and which has eliminated poverty within its own borders, to be forced to accept a flood of migrants from regions of high fertility. Therefore the extent of immigration should be among those issues to be decided locally.

Security, and controls on the manufacture and export of armaments will require an effective authority at the global level.

The steps needed to convert the United Nations into a World Federation can be taken cautiously, one at a time. Having seen the results of a particular step, one can move on to the next. The establishment of the International Criminal Court is an important first step towards a system of international laws that acts on individuals. Another important step would be to give the UN a much larger and more reliable source of income. The establishment of a standing UN emergency military force is another step that ought to be taken in the near future.

12.4 Obstacles to a World Federation

It is easy to write down what is needed to convert the United Nations into a World Federation. But will not the necessary steps towards a future world of peace and law be blocked by the powerholders of today? Not everyone wants peace. Not everyone wants international law.¹

The United Nations was established at the end of the most destructive war the world had ever seen, and its horrors were fresh in the minds of the delegates to the 1945 San Francisco Conference. The main purpose of the Charter that they drafted was to put an end to the institution of war. It was hoped that as a consequence, the UN would also end the colonial era, since war is needed to maintain the unequal relationships of colonialism. Neither of these things happened. War is still with us, and war is still used to maintain the intolerable economic inequalities of neocolonialism. The fact that military might is still used by powerful industrialized nations to maintain economic hegemony over less developed countries has been amply documented by Professor Michael Klare in his books on Resource Wars.

Today 2.7 billion people live on less than \$2 a day - 1.1 billion on less than \$1 per day. 18 million of our fellow humans die each year from poverty-related causes. In 2006, 1.1 billion people lacked safe drinking water, and waterborne diseases killed an estimated 1.8 million people. The developing countries are also the scene of a resurgence of other infectious diseases, such as malaria, drug-resistant tuberculosis and HIV/AIDS.²

¹The interested reader can find the "Hague Invasion Act" described on the Internet

²It would be wrong to attribute poverty in the developing world entirely to war, and to exploitation by the industrialized countries. Rapid population growth is also a cause of poverty. Nevertheless, the enormous contrast between the rich and poor parts of the world is partly the result of unfair trade agreements

Meanwhile, in 2011, world military budgets reached a total of 1.7 trillion dollars (i.e. 1.7 million million dollars). This amount of money is almost too large to be imagined. The fact that it is being spent means that many people are making a living from the institution of war. Wealthy and powerful lobbies from the military-industrial complex are able to influence mass media and governments. Thus the institution of war persists, although we know very well that it is a threat to civilization and that it responsible for much of the suffering that humans experience.

Today's military spending of almost two trillion US dollars per year would be more than enough to finance safe drinking water for the entire world, and to bring primary health care and family planning advice to all. If used constructively, the money now wasted (or worse than wasted) on the institution of war could also help the world to make the transition from fossil fuel use to renewable energy systems.

The way in which some industrialized countries maintain their control over less developed nations can be illustrated by the "resource curse", i.e. the fact that resource-rich developing countries are no better off economically than those that lack resources, but are cursed with corrupt and undemocratic governments. This is because foreign corporations extracting local resources under unfair agreements exist in a symbiotic relationship with corrupt local officials.

As long as enormous gaps exist between the rich and poor nations of the world, the task turning the United Nations into an equitable and just federation will be blocked. Thus we are faced with the challenge of breaking the links between poverty and war. Civil society throughout the world must question the need for colossal military budgets, since, according to the present UN Charter, as well as the Nuremberg Principles, war is a violation of international law, except when sanctioned by the Security Council. By following this path we can free the world from the intolerable suffering caused by poverty and from the equally intolerable suffering caused by war.

12.5 Governments of large nations

The problem of achieving internal peace over a large geographical area is not insoluble. It has already been solved. There exist today many nations or regions within each of which there is internal peace, and some of these are so large that they are almost worlds in themselves. One thinks of China, India, Brazil, Australia, the Russian Federation, the United States, and the European Union. Many of these enormous societies contain a variety of ethnic groups, a variety of religions and a variety of languages, as well as striking contrasts between wealth and poverty. If these great land areas have been forged into peaceful and cooperative societies, cannot the same methods of government be applied globally?

Today there is a pressing need to enlarge the size of the political unit from the nation-state to the entire world. The need to do so results from the terrible dangers of modern weapons and from global economic interdependence. The progress of science has created imposed by means of "regime change" and "nation building", i.e. interference backed by military force.

this need, but science has also given us the means to enlarge the political unit: Our almost miraculous modern communications media, if properly used, have the power to weld all of humankind into a single supportive and cooperative society.

Suggestions for further reading

1. Francesco Stipo, *World Federalist Manifesto. Guide to Political Globalization*, (April 10, 2007), pages 1, 3, 21 and 136.
2. Francesco Stipo, *United Nations Reorganization. The Unification of the UN System*, (April 21, 2007).
3. International Commission on Peace and Food, *Uncommon Opportunities: An Agenda for Peace and Equitable Development, 2nd Edition*, pages 43-46, (2004).
4. Alexander Hamilton, James Madison and John Jay, *The Federalist Papers*, (1787-1788), Project Gutenberg.
5. Edith Wynn, *World Federal Government in Maximum Terms: Proposals for United Nations Charter Revision*, Fedonat Press, Afton N.Y., (1954).
6. Grenville Clark and Louis B. Sohn, *World Peace Through World Law*, Harvard University Press, (1958).
7. Bertrand Russell, *Has Man A Future?*, Penguin, Hammondsworth, (1961).
8. Michael Klare, *Resource Wars: The New Landscape of Global Conflict* Owl Books, New York, (reprint edition 2002).
9. Michael Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy*, Henry Holt & Company, (2008).
10. Michael Klare, *The Race for What's Left: The Global Scramble for the World's Last Resources*, Metropolitan Books, (2012).
11. United Nations General Assembly, *Principles of International Law Recognized in the Charter of the Nürnberg Tribunal and in the Judgment of the Tribunal*, (1950).
12. Bengt Broms, *United Nations*, Suomalainen Tiedeakatemia, Helsinki, (1990).
13. S. Rosenne, *The Law and Practice at the International Court*, Dordrecht, (1985).
14. S. Rosenne, *The World Court - What It Is and How It Works*, Dordrecht, (1995).
15. J. D'Arcy and D. Harris, *The Procedural Aspects of International Law (Book Series), Volume 25*, Transnational Publishers, Ardsley, New York, (2001).
16. H. Cullen, *The Collective Complaints Mechanism Under the European Social Charter*, European Law Review, Human Rights Survey, p. 18-30, (2000).
17. S.D. Bailey, *The Procedure of the Security Council*, Oxford, (1988).
18. R.A. Akindale, *The Organization and Promotion of World Peace: A Study of Universal-Regional Relationships*, Univ. Toronto Press, Toronto, Ont., (1976).
19. J.S. Applegate, *The UN Peace Imperative*, Vantage Press, New York, (1992).
20. S.E. Atkins, *Arms Control, Disarmament, International Security and Peace: An Annotated Guide to Sources, 1980-1987*, Clio Press, Santa Barbara, CA, (1988).
21. N. Ball and T. Halevy, *Making Peace Work: The Role of the International Development Community*, Overseas Development Council, Washington DC, (1996).

22. F. Barnaby, Ed., *The Gaia Peace Atlas: Survival into the Third Millennium*, Doubleday, New York, (1988)
23. J.H. Barton, *The Politics of Peace: An Evaluation of Arms Control*, Stanford Univ. Press, Stanford, CA, (1981).
24. W. Bello, *Visions of a Warless World*, Friends Committee on National Education Fund, Washington DC, (1986).
25. A. Boserup and A. Mack, *Abolishing War: Cultures and Institutions; Dialogue with Peace Scholars Elise Boulding and Randall Forsberg*, Boston Research Center for the Twenty-first Century, Cambridge, MA, (1998).
26. E. Boulding et al., *Bibliography on World Conflict and Peace*, Westview Press, Boulder, CO, (1979).
27. E. Boulding et al., Eds., *Peace, Culture and Society: Transnational Research Dialogue*, Westview Press, Boulder, CO, (1991).

Index

- A billion deaths from famine, 151
- A broken promise, 10
- A Confession, 226
- Abe, Shinzo, 153
- Abolish nuclear weapons, 140, 310
- Abolition of nuclear weapons, 146, 280, 283
- Abolition of war, 146, 280, 281, 319, 387, 390, 398, 417, 421
- Abraham Lincoln, 237
- Absolute sovereignty, 34
- Absolutely sovereignty obsolete, 417
- Acceleration of cultural change, 25
- Accents, 27
- Accident waiting to happen, 151, 165, 171, 200
- Accidental nuclear war, 140, 146, 163, 166, 171, 200, 419
- Act of Valor, 213
- Actions of the sexes, 78
- Adam Smith, 73
- Admiral von Turpitz, 186
- Adolf Hitler, 188, 271
- Advantage versus truth, 33
- Advertising campaigns, 79
- Afghanistan, 90
- Africa, 206
- African voting rights, 68
- Agent Orange, 121, 144
- Aggression, 20, 21, 23, 30
- Aging storage tanks, 163
- Agreed-upon lies, 33
- Agricultural revolution, 32
- Agriculture, 147, 174, 203
- Ahmed, Eqbal, 340, 341
- Air travel less pleasant, 350
- Airbus, 209
- Akiba, Tadatoshi, 320
- Al-Qaeda, 205
- Alaska, 25
- Albert Einstein, 265
- Alexandria, 65
- Algeria, 86
- All nations would suffer, 151
- All-destroying nuclear war, 165
- Almost 2 trillion, 78
- Alternative media, 330, 360
- Altes, Dr. Edy Korthals, 323
- Altruism, 23, 30
- Always heroic and in the right, 313
- Ambassador April Glaspie, 88
- American fleet, 65
- American Friends Service Committee, 324
- American Sniper, 213
- Amherst, Lord Jeffrey, 63
- An act of aggression, 10
- Anachronism of nation-states, 34
- Anachronistic institutions, 327
- Anarchy, 34
- Anarchy at the global level, 418
- Ancestor worship, 27
- Ancient Wisdom, Modern World, 326
- Anglo-Saxon master race, 68
- Angola, 86
- Animal groups, 31
- Anna Karenina, 226
- Annan, Kofi, 163, 175, 202
- Annihilation of civilization, 269
- Anthropocene, 212
- Anthropoid apes, 25
- Anti-Communism, 280

- Anti-war manifesto, 267
- Anticommunist alternative, 189
- Antimalarial program, 141
- Anxiety about the future, 142
- Apartheid system, 68
- Appalling war machine, 79
- Arab nationalism and Islam, 29
- Arab-Arab conflicts, 88
- Archbishop of Canterbury, 274
- Architects for 9/11 Truth, 350
- Arctic sea ice, 80
- Argentina, 25
- Aristotle, 32
- Armaments (\$1.7 trillion spent on), 140
- Armaments race, 185, 187
- Armistice Day, 245
- Arms control agreements, 212
- Arms industry, 418
- Arms manufacturers, 187, 349
- Arms race, 185
- Arms Trade Treaty, 381
- Army training program, 214
- Arndt, Ernst Moritz, 38
- Arrogance, 79
- Art objects, 25
- Article VI, 171, 200
- Articles of Confederation, 366
- Askov College, 295
- Assange, Julian, 309
- Assassination of King, 237
- Assassination using drones, 349
- Asteroids, 171, 200
- Astonishing unrealism, 151
- Asylum, 142
- Atomic bomb, 22, 272
- Atoms for peace?, 152
- Atrocities, 22, 41, 64, 67
- Attacking civil liberties, 350
- Auschwitz, 188, 309
- Australia, 314
- Austria, 35
- Austria-Hungary, 185
- Automobile accidents, 351
- B-52 bomber, 165
- Ba'ath Party, 87
- Babies torn from mothers, 137
- BAE Systems, 209
- Baha'i, 322
- Balance of power, 66
- Barak, Ehud, 151
- Baring, Anne, 68
- Barnaby, Frank, 163
- Battle of Leipzig, 39, 40
- Battleground series, 326
- Battleships, 186
- Bedjaoui, Muhammad, 170, 199
- Behavior, 13
- Behind Enemy Lines, 213
- Belgian Congo, 272
- Belgian Queen Mother, 272
- Belgium, 65
- Belloc, Hilaire, 65
- Bering Strait, 25
- Berlin destroyed, 137
- Bernard Lowen, 146
- Bikini Atol, 319
- Bikini explosion, 140
- Bikini test, 274
- Bilateral agreements, 82, 145
- Bill of Rights, 367
- Billion or more deaths, 79
- Biocultural Rights, 383
- Biological weapons, 63, 87, 278, 315
- Biological Weapons Convention, 278, 379
- Biology of War and Peace, 26
- Biosphere, 78
- Birth anomalies, 144
- Birth defects, 121, 140
- Bits, 17
- Black comedy, 165
- Black Hawk Down, 213, 214
- Blair, Bruce G., 171, 200
- Bloated military budgets, 78
- Blood for oil, 85
- Bloodbath at Cajamarca, 64
- Boeing, 209

- Boer War, 66, 92
- Bohr, Niels, 158
- Bohr-Wheeler theory, 158
- Bombardment of Copenhagen, 132
- Bombardments, 65
- Bombing infrastructure, 89
- Bombing of Cambodia and Laos, 124
- Bombing water-purification, 89
- Bombs Over Cambodia, 125
- Booker T. Washington, 234
- Books, 34
- Born, Max, 282
- Bottomless pit of war, 78, 350
- Boycott protesting segregation, 234
- Boycotting British goods, 233
- Brazil, 25, 314
- Brazil and Paraguay clash over river, 95
- Bread and circuses, 328, 360
- Breakdown of human society, 151
- Breivik, Anders Behring, 216
- Brexit, 212
- Bridgeman, Perry W., 282
- Brink of nuclear war, 79
- Britain, 65, 185
- British imperialism, 68
- British warships, 65
- Brose Eric, 185
- Brotherhood of all humankind, 227
- Brownian motion, 266
- Brutalization of values, 187
- Buddha, 32
- Buffer zones, 418
- Building 7, 350, 351
- Bulldozers, 69
- Bumble bees, 15
- Burial customs, 27
- Burned cottages, 78
- Burning the Koran, 349
- Bush family and Hitler, 188
- Bush political dynasty, 189
- Bush, George W., 188, 381
- Bush, Prescott, 188
- Bush/Nazi connection, 189
- Buying votes, 88
- Cajoling, extracting, threatening, 88
- Caldecott, Helen, 190
- Call of Duty, 216
- Calogero, Francesco, 175, 201
- Cambodia, 125
- Cambodian genocide, 33
- Campaign for Nuclear Disarmament, 274
- Canada, 314
- Cancer caused by radioactivity, 144
- Cancer risk from Hanford, 164
- Canons, use in warfare, 34
- Canton, 65
- Canton civilian bombing, 136
- Capital, 73, 82
- Capone, Al, 317
- Carbon tax, 421
- Carefully chosen powers, 421
- Casing of ordinary uranium, 274
- Caste markings, 27
- Castles, 34
- Catastrophic accident, 140
- Catastrophic climate change, 79, 329
- Catastrophic global war, 187
- Catastrophic mistake, 171, 200
- Catastrophic nuclear war, 146, 147, 151, 166, 202, 203
- Cathartic model of instincts, 20
- Central America, 79
- Central banks, 68
- Central government, 35
- Central Intelligence Agency, 83
- Central monarchs, 34
- Ceremonies, 27
- Chad, 206
- Chadors, 27
- Chain-reacting pile, 158
- Chamberlain, Neville, 136
- Chance of survival, 202
- Chauvinism, 314
- Cheating ring, 165
- Chemical signals, 31

- Chemical warfare, 144
Chemical weapons, 121, 278, 315
Chemical Weapons Convention, 278, 380
Chemical weapons plant, 87
Chernobyl, 151, 153
Child labor, 76
Child soldiers, 142
Children killed by wars, 141, 169, 198
China, 25, 65, 208
China floods Yellow River, 1938, 95
China's large dollar holdings, 166, 357
Chinese-Russian support, 151
Cholula Massacre, 64
Chomsky, Noam, 330, 340, 377
Choshu, 65
Christian and pagan symbolism, 39
Christian elements of national cult, 40
Christian ethics, 324
Christianity, 65, 226, 234
Christianity and war, 227
Churchill, Winston, 87
CIA insider Lindauer, 350
CIA protégé, 90
Circumcision, 27
Civics, 316
Civil rights, 230, 351
Civil rights movement, 234, 237
Civil society, 175, 202, 427
Civil war, 206
Civil wars, 141, 206, 317
Civilian casualties, 391, 419
Civilian victims of war, 169, 198
Civilians as hostages, 140
Civilians as targets, 175, 202
Civilians killed in war, 141
Civilization, 33
Civilization's crisis, 140
Clark, General Wesley, 205
Clark, Ramsey, 89
Clathrates, 80
Clay tablets, 32
Climate and environment, 212
Climate change, 100, 278, 350, 356
Climate change and conflicts, 100
Climate change denial, 33
Climate Change Obligation, 382
Climate Conference, 356
Climate scientists, 79
Climate-induced water shortages, 100
Cluster bombs, 144
CND, 274
Coal and steel, 189
Coastal cities drowned, 80
Cocoons, 15
Coercion of states, 413, 414
Cohesion, 41
Cold War, 66, 140, 145, 163, 171, 200, 206, 278, 319, 349, 351
Cold War tensions, 418
Collapse of Building 7, 350
Collective body, 132
Collective punishment, 377
Colombia, 86
Colonial era, 145
Colonial expansion, 65
Colonial Roots of Nazism, 67
Colonial system, 233
Colonialism, 64, 66, 67, 92, 314, 382
Colonialism and World War I, 187
Comb-making instinct, 15
Common bonds of humanity, 131
Common Dreams, 328
Common land, 74
Common values, 323
Communal aggression, 22
Communal defense response, 20, 21, 30
Communication, 34
Communications media, 317
Communism, 280
Communist Party, 190
Competition, 26, 65, 73
Complex civilizations, 73
Compulsory military service, 269
Computer games, 214
Concentration of CO₂, 80
Concentration of hysteria, 356

- Conditioning of soldiers, 132
- Conference on Disarmament, 150
- Confessions of Economic Hit-Man, 83
- Conflict Resolution, 330
- Conflicts over oil, 101
- Conflicts over water, Middle East, 100
- Confucius, 32
- Congress Party, 232
- Conquistadors, 64
- Conscience banished, 131
- Conscience of humanity, 136
- Consolidated Silesian Steel, 189
- Conspicuous consumption, 232
- Constitutional convention at Corowa, 423
- Consumed radioactive food, 164
- Consumption, 232, 317
- Container ships, 163
- Control of the planet's resources, 83
- Control over oilfields, 86
- Controlled demolition, 350
- Convention of 1792, 34
- Cooperation, 23, 31, 32, 318, 327
- Cooperation in animals, 31
- Cooperative future, 140
- Cooperatives, 322
- COP21, 356
- Corowa Plan, 423
- Corporate-controlled media, 356
- Corpses left unburied, 137
- Corrie, Rachael, 309
- Corrupt governments, 82, 86
- Corrupt local officials, 145
- Cortez, Hernan, 64
- Cost of war, 187
- Cotton cloth, 64
- Council on Foreign Relations, 68
- Count Leo Tolstoy, 225, 230
- Countercurrents, 328
- Courage, 22
- Court of world opinion, 230, 235
- Crime of aggression, 381
- Crimes against humanity, 381
- Crisis, 29
- Crisis of civilization, 390
- Critical mass, 158
- Crofters houses burned, 74
- Cruelty, 76
- Cruelty by children, 27
- Crusades, 29, 33, 65
- CTBT, 278
- Cuban Missile Crisis, 9, 34, 190
- Cult of nationalism, 40
- Cultural barriers to marriage, 26
- Cultural evolution, 26, 31
- Cultural history, 314
- Culture, 16, 25, 283
- Culture and human solidarity, 317
- Culture of peace, 327
- Culture of violence, 145, 206, 213, 327
- Cumulative risk, 202
- Curriculum revisions, 316
- Curvature of space, 268
- Daisaku Ikeda's Peace Proposals, 283
- Dakota Access Pipeline, 69
- Dalai Lama, 324, 326
- Damage to agriculture, 79
- Damage to infrastructure, 143
- Dances and songs, 27
- Dangerous feedback loops, 80
- Dangerous landmark, 80
- Dangerous proliferation, 152
- Dangerous radioisotopes, 154
- Daniel Ellsberg, 116, 117
- Danish fleet, 132
- Danish National Pugwash Group, 319
- Danish Peace Academy, 322, 328, 344
- Danton, 34
- Darfur, 33
- Darwin, Charles, 13, 15, 29, 30
- Deaths due to sanctions, 89
- Deaths, 62-78 million, 150
- Debt slavery, 85
- Decay of democracy, 78, 196
- Decision-makers, 279
- Declaration of Human Rights, 142

- Dedicated editors, 330
- Defiled street, 78
- Democracy Now, 69, 330
- Democratic Republic of Congo, 206
- Demoralizing effects, 78
- Depleted uranium shells, 144
- Deprived of civil rights, 351
- Designated as an enemy, 131
- Destruction of civilization, 30
- Deterrence, flaws in concept, 169, 198
- Developing countries, 82, 85, 144
- Development, 141
- Devil's Dynamo, 196
- Devotion, 21, 22
- Dialects, 27, 39
- DiCaprio, Leonardo, 328
- Dictatorships, 86
- Diction, 27
- Diet, 27
- Diminishing resources, 232
- Diplomats, 278
- Direct costs of war, 140
- Direct political power, 87
- Disarmament, 170, 198, 323
- Disease, 150, 206, 314
- Diseases related to poverty, 141, 391
- Disempowered TV viewers, 360
- Disposal of radioactive waste, 154
- Distanced from killing, 216
- Diversity is valuable, 424
- Division of Labor, 73
- DNA sequences, 32
- Dog bites, 69
- Domestic industry, 73
- Doomsday Machine, 165, 166
- Dr. Strangelove, 165
- Drama, 316
- Drank radioactive milk, 164
- Dreadnought-class ships, 185
- Dresden destroyed, 137
- Driven from the land, 74
- Driven like cattle, 350
- Driven towards war, 357
- Drone operators, 216
- Drop the Just War Theory, 310
- Droves of vicious rats, 137
- Drug addiction, 165, 190
- Drug-resistant tuberculosis, 144
- Drugs, 166
- Duke of Buccleuch, 73
- Dulce et Decorum Est, 245, 312
- Duty, 30
- Dylan, Bob, 328
- East Asia, 208
- Eaton, Cyrus, 278, 319
- Ecological catastrophe, 79, 229
- Ecological catastrophes, 360
- Ecological considerations, 74, 78
- Ecological damage, 121, 143
- Ecological destruction, 102
- Economic and cultural interdependence, 313
- Economic collapse, 350
- Economic growth, 74
- Economic hegemony, 145
- Economic hit men, 83
- Economic inequality, 145
- Economic influence, 196
- Economic infrastructure, 419
- Economic interdependence, 34, 317, 363
- Economic justice, 323
- Economic reforms, 323
- Economic waste, 176
- Economists, 278
- Economy of exclusion, 325
- EcoWatch, 328
- Ecstasy, 21
- Edna St. Vincent Millay, 251
- Education, 33, 140, 317, 327
- Education for peace, 313, 323
- Educational theory, 225
- Effects of war on children, 142
- Egypt and Ethiopia dispute Nile, 96, 102
- Eibl-Eibesfeldt, Irenäus, 26, 29
- Einstein's letter to Freud, 268
- Einstein, Albert, 259, 274, 282, 319, 327

- Eisenhower's Farewell Address, 196, 392
- Eisenhower, Dwight D., 152, 349
- ElBaradei, Mohamed, 173, 201
- Elderly homeless persons, 325
- Electrical generating plants, 143
- Electronic media, 327
- Elementary peace education, 315
- Eliminating war, 278
- Elitist goal, 68
- Emotions, 13, 33, 34
- Enclosure Acts, 74
- End of the human race, 281
- End to the human race, 278
- Endemic conflict, 206
- Endless crises, 78
- Ends and means, 230
- Engineering firms, 83
- Engineering students, 315
- Engineers, responsibility of, 315
- English Bill of Rights, 366
- Enlightened environmental laws, 424
- Enlightenment, 34
- Enormous human suffering, 145
- Enrichment, 173, 201
- Enrico Fermi, 272
- Environmental catastrophe, 328, 357
- Environmental component of learning, 17
- Environmental holocaust, 144
- Environmental responsibility, 69
- Environmental review, 70
- Epidemics, 141
- Epidemics in Iraq, 89
- Epitaph for the Race of Man, 251
- Equality under law, 66
- Eradication of smallpox, 141
- Eritria, 206
- Erosion of self-respect, 131
- Escalation, 357
- Escalation of conflicts, 230
- Escalatory cycles of violence, 169, 198
- Ethical considerations, 74, 78
- Ethical principles, 29, 169, 198, 315
- Ethical responsibility, 315
- Ethical systems, 363
- Ethics, 363
- Ethiopia, 206
- Ethnic differences, 230
- Ethnic groups, 315, 316
- Ethnic identity, 26
- Ethnicity, 26
- Ethnicity and religion, 29
- Ethology, 13, 16
- Euclidean geometry, 265
- Eugenics movement, 68
- Europe, 66, 92
- European Coal and Steel Community, 423
- European colonial conquests, 29
- European diseases, 64, 65
- European rule, 65
- European Union, 314, 315, 317, 423
- Evangelii Gaudium, 325
- Everyday experience, 33
- Everyone treated as criminal, 350
- Evolution, 33, 327
- Evolutionary history of life, 251
- Exaltation of selfishness, 82
- Exceptionalism, 67, 382
- Exchange of ideas, 32
- Excrementous matter, 78
- Excuse for invading Iraq, 350
- Expanded German navy, 186
- Exploitation, 233
- Explosive charges and 9/11, 350
- Exponential growth, 85
- Exporters of small arms, 145
- Exposure, 150
- Expression of emotion by babies, 16
- Expression of emotions, 13, 15
- Extinction, 251
- Extortion, 83
- Extracting local resources, 145
- Extracting raw materials, 85
- Extremely long half-lives, 154
- Fabians, 66, 92
- Facial expressions, 15

- Factory civilization, 233
Factory system, 76
Falk, Richard, 330
Fallout, 170, 199
Falluja 2, 87
False threats, 357
Famine, 141, 174, 323, 329, 356, 394
Famine relief, 140, 229
Famous names of truth-tellers, 330
Fanaticism, 21, 35, 50
Fast breeder reactors, 159
Fatal accident, 173, 201
Fatherland, 38, 40
FBI, 317
Fear of communism, 189
Federal Constitution of the United States, 366, 414, 422
Federal government of Australia, 423
Federalist Papers, 367
Federations, 314
Feedback loops, 80
Feelings of panic, 139
Fermi, Enrico, 158
Fertility of mixed marriages, 26
Festivals, 39, 40
Feudal barons, 34
Feudal principalities, 35
Fichte, Johan Gottlieb, 37
Fichtians, 50
Fielden, John, 76
Fighting in the War Room, 166
Filed teeth, 27
Films that glorify war, 213
Filth in the street, 78
Financial architects of Nazism, 188
Financial institutions, 314
Financial power, 82
Fire, 41
Fire storms, 147, 203
Firebombing of Dresden, 169, 198
Firebombing of Hamburg, 136
Firestorms, 137
Firmness in the truth, 232
First-class war aim, 87
Fischer, R.A., 23, 30
Fission reaction, 146
Fission-fusion-fission bomb, 274
Fissionable isotopes, 201
Flags, 21, 40
Fleeing refugees targeted, 136
Flocks of birds, 31
Flogged, fettered and tortured, 76
Food and Agricultural Organization, 371, 387, 417
Foreign domination, 233
Foreign women, 166
Forge of Empires, 216
Former Soviet Union, 208
Forum for informal diplomacy, 278
Fossil fuel corporations, 357
Fossil fuel industries, 78, 79
Fossil fuels, 356
Fractional reserve banking, 350
France, 35, 65, 185, 208
Franklin D. Roosevelt, 272
Fraudulent financial reports, 83
Frederick the Great, 35, 38
Free association, 316
Free market, 74
Free market not sacred, 233
Free-falling collapse, 350
French culture, 35, 38
French Revolution, 34, 35
Freud, Sigmund, 269
Friedrich Krupp AG, 186
Friendly hands, 32
Frisch, Karl von, 16
Frisch, Otto, 158
Frozen tundra, 80
Fukushima, 151, 153
Full employment, 317
Full Spectrum Warrior, 214
Future generations, 140, 330
Galtung, Fumiko, 330
Galtung, Johan, 328, 330

- Gandhi, 227, 229, 234, 235, 309
- Gandhi's autobiography, 344
- Gandhi, Mahatma, 324, 397
- Gandhian economics, 232
- Gas warfare, 245
- Gaskell, Dr. Peter, 76
- Gaza, 377
- Gebrial, Dalia, 68
- General Dynamics, 209
- General Rosas' genocide, 63
- Genes, 23
- Genetic change, 26
- Genetic engineering, 315
- Genetic evolution, 31
- Genetic pool, 146
- Genetic predisposition, 17
- Genetically programmed responses, 17
- Genetically similar individuals, 30
- Geneva Conventions, 315, 377
- Geneva Protocol, 87
- Genius for cooperation, 33, 318
- Genocidal nuclear war, 9
- Genocide, 29, 33, 67, 169, 198, 377, 381
- Genocide against Jews, 29
- Genocides in the Americas, 63
- Geography, 316
- George H.W. Bush, 10, 188
- George W. Bush, 188
- German Fatherland, 38
- German invasion of Russia, 10
- German language, 38
- German Luftwaffe, 136
- German May, 40
- German nationalism, 29, 37
- German nationalist movement, 35, 39
- German nationalists, 40
- German naval buildup, 185
- German-speaking students, 35
- Germany, 35, 65, 185, 314
- Germany and Japan: economic miracles, 419
- Germany's African empire, 67
- Germany's armament industry, 188
- Germany's wars, 39
- Global consciousness, 313, 326
- Global ethic, 313, 327
- Global exchanges, 32
- Global famine, 329, 357
- Global food security, 350
- Global governance, 145
- Global hegemony, 208
- Global inequalities, 316
- Global Policy Forum, 85
- Global power, 208
- Global warming, 80
- Globalization, 34, 83
- Glory, 37
- Goodman, Amy, 69, 205, 328, 330
- Gorbachev, Soviet President, 278
- Governmental intervention, 74
- Governmental terrorism, 132
- Governments of large nations, 427
- Grave implications, 196
- Gravitation, 267
- Great cities, 82
- Great Depression, 166
- Great-power competition, 208
- Greece, 85, 185
- Greed, 63, 68, 74, 82, 232, 258
- Greed-based economy, 78
- Green Berets, 214
- Greenham Common Songbook, 344
- Greenhouse gases, 80
- Greenland ice sheet, 80
- Grey, Colin S., 171, 200
- Griffin, G. Edward, 68
- Gross violations of human rights, 420
- Grotius, 315
- Group identity, 25
- Group selection, 23, 30
- Growth-obsessed economy, 78
- Grundtvig, N.F.S., 321
- Grundtvigian Peoples' Colleges, 321
- Guatemalan genocide, 64
- Guernica, 136
- Guilt, 169, 198
- Gulf War of 1990, 89, 143, 144

- Gulf War, 2003, 90
- Gulf Wars, 34
- Guns, 186
- Guns in schools?, 213
- Guterres, Antonio, 150
- Gymnasts, 40
- Hague Conventions, 315
- Hague invasion clause, 381
- Hair standing on end, 22
- Hair-trigger alert, 140, 151, 171, 200
- Haldane, J.B.S., 23, 30
- Hambrach Castle, 40
- Hamilton, Alexander, 367, 413, 414
- Hamilton, W.D., 23, 30
- Hammurabi's Code, 363
- Hanford experiments on humans, 164
- Hankey, Sir Maurice, 87
- Hanseatic League, 314
- Happy society, 74
- Hartmann, Thom, 328, 330
- Hedges, Chris, 330
- Hegel, G.W.F., 41
- Heiliger Schauer, 22
- Heine, Heinrich, 41
- Henry David Thoreau, 234
- Herbicides, 144
- Hereditary component of learning, 17
- Hermann Minkowski, 266
- Hermann's Battle, 41
- Hermod Lannung Foundation, 320, 321
- Hero face, 22
- Heroic behavior, 21
- Heroism, 20
- Herring gulls, 17
- Hibakushas, 324
- High level of consumption, 317
- High-yield agriculture, 357
- Higher loyalty, 32
- Highland Clearance, 74
- Highly enriched uranium, 152, 173, 201, 202
- Hinde, Robert A., 20
- Hindu and Muslim communities, 230
- Hinduism, 322
- Hiroshima, 21, 33, 137, 146, 150, 153, 158, 274, 279–281, 283, 327
- Hiroshima Peace Committee, 324
- Historical conflicts related to water, 95
- History, 27, 316, 327
- History of Racism, 67
- History of science, 315
- History teaching, 314
- History teaching must be reformed, 318
- History, teaching, 313
- Hitler as Chancellor, 190
- Hitler invades Poland, 136
- Hitler Youth, 21
- Hitler's bombing of Warsaw, 136
- Hitler's rise to power, 186, 189, 271
- HIV/AIDS, 144
- HMS Dreadnought, 186
- Hobson, John Atkinson, 66, 92
- Hoffer, Eric, 131
- Holger Terp's autobiography, 344
- Holocaust, 33
- Holocaust Museum in Huston, 64
- Holy festivals, 39
- Holy shiver, 20
- Holy war, 39
- Hominids, 25
- Honey-bees, 15
- Hoodbhoy, Pervez, 162, 341
- Hope for the future, 25
- Hospitality, 27
- Hospitals targeted, 136
- House of Representatives, 423
- Howitzers, 186
- Human civilization, 78, 82
- Human civilization threatened, 140
- Human emotional nature, 271
- Human emotions, 16
- Human error and nuclear war, 146
- Human failings, 171, 200
- Human gene pool, 274
- Human groups, 31
- Human history, 82

- Human nature, 16, 29, 33
- Human rights, 315, 316, 323, 420
- Human rights abuses, 145
- Human sacrifice, 246
- Human solidarity, 318, 428
- Human species might survive, 356
- Humanism, 283
- Humanitarian law, 170, 198, 200
- Humanitarian tragedies, 212
- Hunter-gatherers, 26, 33
- Huntington Ingals, 209
- Hydrological cycle, 148, 151, 203
- Hysteria, 356

- ICAN, 384
- ICBM's Carey drank heavily, 166
- ICC, 381
- Idolatry of the Free Market, 323
- Ikeda, Daisaku, 283, 295
- Illegality of NATO, 373
- Illegality of nuclear weapons, 170, 198, 372
- Illegality of war, 66
- Illiteracy, 141, 314
- Impartiality, 421
- Impartiality and neutrality, 418
- Imperialism, 65, 66, 68
- Imperialism: A Study, 66, 92
- Imprinting, 20
- Inaction is not an option, 330
- Incendiary bombings, 147, 203
- Incendiary bombs, 87
- Incendiary rockets, 132
- Incompetent person, 165
- Increased arms trading, 212
- India, 25, 34, 175, 202, 208
- India and Pakistan divide Indus, 95
- India's nuclear weapons, 162
- India-Pakistan war danger, 162
- Indian home rule, 232
- Indian independence movement, 233
- Indian textile industry, 64
- Indigenous faiths, 322
- Indigenous peoples, 63

- Indirect costs of war, 140, 314
- Indirect effects of war, 391, 419
- Indiscriminate mass slaughter, 169, 198
- Individual citizens, 316
- Individual conscience, 131
- Individual identity lost, 132
- Individual self-interest, 73
- Individual, value of, 37, 38
- Individualism, 38
- Indo-China conflicts, 141
- Indoctrination in nationalism, 313
- Indonesia, 86
- Industrial powers, 65
- Industrial Revolution, 64, 66, 76, 78, 92, 185, 315, 322
- Industrialized countries, 82
- Industrialized nations, 65, 85, 145
- Inequality, 78, 314, 325
- Inertia of educational systems, 312
- Infeld, Leopold, 282
- Information accumulation, 26
- Information transfer, 32
- Infrastructure, 140, 318
- Injustice, economic, 34
- Innocent grandmothers, 350
- Insane person, 165
- Instinctive behavior, 13
- Instincts, 13, 15
- Institution of war, 131, 140, 141, 144, 175, 202
- Insurrection of peoples, 34
- Inter-group aggression, 30
- Inter-group marriage, 31
- Interdependence, 32, 34, 323
- Internal peace, 25, 316, 317
- Internally displaced persons, 142
- International borders, 142
- International control, 201
- International cooperation, 212
- International Court of Justice, 315, 372
- International Criminal Court, 315, 381
- International law, 66, 82, 145, 315, 327, 417, 418

- International laws, 363
- International Monetary Fund, 85
- International Peace Bureau, 295
- International police force, 395
- Internationalism, 317
- Interreligious understanding, 315
- Intertribal aggression, 23
- Intertribal massacres, 29
- Intolerable economic inequality, 145
- Intra-group altruism, 30
- Intragroup aggression, 20
- Invasion of Kuwait, 88
- Invasion of Transvaal, 186
- Invasion of Ukraine, 9
- Invention of agriculture, 363
- Invention of printing, 31, 32
- Invention of writing, 31
- Invisible hand, 73, 74
- Iodine 131, 164
- IPCC, 80, 387
- Iran, 86, 175, 202, 205, 208
- Iran nuclear deal, 212
- Iran, attack by Israel, 166
- Iraq, 86, 87, 205
- Iraq Wars of 1990 and 2003, 306
- Iraq, Syria mobilize troops over drought, 96
- Iraqi oil, 87
- Irish Republican Army, 306
- Iron and steel company, 186
- Irrational beliefs, 33
- Irresponsible decisions, 163
- Irreversible damage to civilization, 146
- Islamic fundamentalists, 90
- Islamic State, 100
- Isotope ratios, 80
- Israel, 166, 208
- Israel and Syria fight over Yarmuk River, 95
- Israel's blockade of Gaza, 309
- Israel's nuclear weapons, 159
- Israel's occupation of Gaza, 306
- It was about oil, 90
- Italy, 65, 185
- Ituri Province of Congo, 29
- Jack D. Ripper, 165
- Jainists, 322
- Japan, 65, 66, 92, 185
- Japanese terror bombing, 136
- Jesus, 32
- Jewelry, 31
- Jewish employees, 190
- John Perkins, 83
- Johnson Administration, 117
- Joliot-Curie, Frederic, 282
- Just society, 74
- Kaiser Wilhelm II, 151, 186
- Kaiser Wilhelm Institute, 267
- Kaiser's genocide, 67
- Kamio, Mark, 295
- Kantians, 50
- Karma, 398
- Kassel destroyed, 137
- Keep terrorism idea fresh, 350
- Kellogg-Briand Pact, 370
- Kermit Roosevelt, 83
- Khan, A.Q., 162
- Khmer Rouge, 125
- Killed by an Israeli bulldozer, 309
- Killing civilians, 132
- Kim Jong-un, 209
- Kindness, 23, 280, 363
- King Lear, 229
- King's Riverside Church speech, 239
- King, Rev. Martin Luther, 190, 324
- Klare, Michael, 145, 426
- Klein, Naomi, 330
- Kleist, 41
- Kobe firebombed, 137
- Koestler, Arthur, 21
- Korean Peninsula, 79
- Korean Peoples Army, 209
- Korean War, 34
- Kosovo, 29
- Kristallnacht, 190
- Krupp family business, 186
- Kubrick, Stanley, 165

- Kurdish civilians gassed, 29
- Kurds slaughtered, 89
- Kuwait, 86, 87
- Kwami Nkrumah, 82
- L-3 Communications, 209
- Labor-intensive methods, 233
- Language, 19, 26, 31, 38
- Language and ethnic identity, 27
- Lao-Tzu, 32
- Laos, 124
- Lapps, 25
- Large nations, 316
- Large-scale famine, 356
- Largest act of environmental warfare, 95
- Largest company in Europe, 186
- Last act of Einstein's life, 274
- Latin, 38
- Laudato Si', 85
- Launch officers cheating, 165
- Law of the Sea, 315
- Laws acting on individuals, 316, 367, 413, 414, 420, 422
- Learning, 17
- Lebanese civil war, 29, 141
- Lebanon, 205
- Legal systems, 363
- LeMay, General Curtis E., 171, 200
- Leo Szilard, 272
- Leonardo-Finmeccanica, 209
- Less developed countries, 145
- Letter to Santa Claus, 376
- Level playing field, 357
- Liberalism, 38
- Libya, 86, 205
- Life on earth threatened, 140
- Life styles from mass media, 359
- Light weapons, 206
- Limitations of sovereignty, 281
- Limited problems, 32
- Limited reserves of uranium, 158
- Limited war, 39
- Lindauer, Susan, 350
- Literature, 27
- Living from war, 196
- Lobbys, 327
- Local communities, 27
- Lockheed Martin, 209
- London, 76
- Long-distance trading, 31
- Long-term effects, 80
- Long-term survival, 82
- Loot, 41
- Lord Cranborne, 136
- Lord Curzon, 87
- Lorenz, Konrad, 16, 20, 21, 23, 26
- Loss of 175 million lives, 143
- Loss of life, 141
- Love, 229, 280
- Love for the poor, 226, 232
- Love your enemies, 237
- Loyalty, 21, 22, 33
- Loyalty to humanity, 327
- Lucky Dragon, 140, 274, 319
- Ludendorff, 189
- Müller, Adam, 37
- Møller, Jan, 295
- Machine gun, 65
- Magna Carta, 365
- Maguire, Anne, 306
- Maguire, Jackie, 309
- Maguire, Mairead, 306
- Maguire, Mairead Corrigan, 306
- Mahatma Gandhi, 227, 229, 232, 234
- Mahayana Buddhists, 322
- Mainz destroyed, 137
- Makiguchi, Tsunisaburo, 283
- Malaria, 144
- Malaysia, 31
- Malnutrition, 141, 314
- Malnutrition from sanctions, 89
- Manchester Guardian, 66, 92
- Manhattan Project, 274
- Manning, Chelsea, 306
- Manufactured goods, 66, 92

- Marcel Grossman, 266, 268
- Marie and Pierre Curie, 271
- Markets, 65, 66, 92
- Marriage, 23
- Marriage across ethnic boundaries, 29
- Marriage within a group, 30
- Marseillaise-singing masses, 35
- Marshall Islands, 140
- Martin Luther King, 230, 234, 239
- Mason, George, 367, 414
- Mass media, 33, 214, 313, 326, 327, 330, 358, 396
- Mass meeting, 40
- Massacres, 29
- Masses, 37
- Massive nuclear retaliation, 169, 198
- Massive retaliation, 324
- Material goods, 233
- Mathew, Binu, 330
- Mattas, James, 208
- Maxim gun, 65
- Maxim, Hiram S., 65
- Maximizing human happiness, 233
- Maximizing production, 233
- Maxwell's equations, 267
- Mayor of Hiroshima, 320
- McNamara's Evil Lives On, 115
- Media as a battleground, 358
- Media exaggeration, 356
- Media neglect of climate change, 360
- Medical consequences of war, 141
- Men's choirs, 40
- Mercenary soldiers, 37
- Merchants, 34
- Mesopotamia, 32, 87
- Metals, 317
- Methane hydrate crystals, 80
- Methane-hydrate feedback, 356
- Mexico, 86
- Michael Klare, 85
- Middle East, 34, 79, 323
- Middle East conflicts, 212
- Middle East proxy wars, 102
- Middle East water conflicts, 100
- Might makes right, 145
- Migrations, 25
- Militant enthusiasm, 21, 22
- Militarism, 269, 283, 306, 318
- Militarism in North Korea, 208
- Militaristic government, 153
- Militarization of governments, 86
- Military budgets, 78, 144, 314
- Military Expenditure Database, 209
- Military experts, 278
- Military force, 87
- Military hardware, 85
- Military mentality, 265
- Military might, 145
- Military spending 2 trillion per year, 427
- Military strength, 66, 92
- Military technology, 212
- Military-colonial methods, 87
- Military-industrial complex, 78, 144, 187, 196, 327, 349–351
- Millay, Edna St. Vincent, 251
- Millions starve, 351
- Mine Ban Treaty, 381
- Mines, 66, 92
- Minister of Education, 320
- Miscalculation, 171, 200
- Misplaced power, 196
- Missile defense system, 175, 202
- Missile Envy, 190
- Mistaken for a missile strike, 171, 200
- Modern arms, 323
- Modern communications media, 428
- Modern feudalism society, 68
- Modern machines, 233
- Modern powerholders, 358
- Modern science, 32
- Modern societies, 359
- Modern society, 32
- Modern weapons, 64, 317
- Modernism, 175, 202
- Molten steel, 350, 351
- Moral force, 230

- Moral responsibility surrendered, 132
- Morality, 37
- More military spending, 212
- More violent conflicts, 212
- Morphology, 13
- Moses, 32
- Mossadegh, 83
- Movement of refugees, 212
- Mujaheddin, 90
- Muller, Herman J., 282
- Multi-ethnic societies, 25
- Multigenerational families, 359
- Multinational corporations, 145
- Multinational network, 189
- Multiple invasions of Russia, 10
- Multiracial society, 25
- Murder, 41, 67, 83
- Murder justified in war?, 131
- Murdering indigenous peoples, 68
- Murderous night-time raids, 349
- Murdos Armistice, 87
- Mustard gas, 87
- Mutual understanding and dialogue, 284
- Myth, 39

- Nagasaki, 21, 137, 150, 153, 158, 163, 279, 327
- Naked and freezing, 70
- Nanjing Massacre, 136
- Nanothermite, 351
- Napoleon, 35, 39, 41, 132
- Nash, Vernon, 413
- Nation-state, 34, 37, 327
- Nation-states, 33, 34, 317
- National armies, 317
- National cult, 40
- National Geographic Chanel, 358
- National identity, 35, 38, 41
- National pride, 175, 202
- National Pugwash groups, 279
- National Rifle Association, 213
- National Security Agency, 83
- National sovereignty, 281
- National symbolism, 40
- Nationalism, 21, 33, 34, 37, 39, 41, 313, 318, 327, 393
- Nationalism a dangerous anachronism, 313
- Nationalism and religion, 29
- Nationalism in England, 41
- Nationalism taught in schools, 313
- Native Americans, 65, 69
- Native graves, 69
- NATO's eastward expansion, 10
- Natural selection, 23, 30
- Naval arms race, 65, 185, 190
- Naval bombardments, 65
- Naval supremacy, 186
- Nazi Germany, 188
- Nazi Party, 29, 40, 67, 188–190
- Nazism, 67
- Need for enemies, 349
- Negative peace, 316
- Nehru, 235
- Nelson, 41
- Nelson Mandela, 230
- Neocolonialism, 67, 82, 92, 314
- Nerve gas, 87
- Netanyahu, Benjamin, 151, 166
- Neutral countries, 151, 169, 198, 357
- New Agenda Resolution, 171, 200
- New leaders, 140
- New Paradise, 278
- New York Times, 117
- Newspapers, 34, 326
- Newton's equations of motion, 267
- Nichiren Buddhism, 283
- Nightmare of peace, 349
- Nixon, 125
- Njal's Saga, 363
- Nkrumah, Kwame, 92
- No one can win a tsunami, 151
- Nobel Peace Prize, 235, 279, 306, 384
- Nobel Prize in Literature, 259, 328
- Noble dead, 39
- Non-Euclidean geometry, 268
- Non-renewable resources, 317

- Non-violence, 232, 312, 324
- Nonviolent civil disobedience, 229, 234
- Normalization of China-Japan relations, 284
- North Africa, 79
- North America, 65
- North Korea, 175, 202, 208
- Northern Ireland, 306
- Northrop Grumman, 209
- Norwegian mass-murderer, 216
- Not what we intended, 151
- NPT, 278, 378
- Nuclear arms race, 139, 190, 236
- Nuclear Ban Treaty, 384
- Nuclear black market, 173, 201
- Nuclear blackmail or terrorism, 419
- Nuclear catastrophe, 146, 229
- Nuclear confrontation, 278
- Nuclear criminals, 162
- Nuclear darkness, 174
- Nuclear deterrence, flaws, 173, 201
- Nuclear environmental catastrophe, 147, 203
- Nuclear families, 359
- Nuclear Mafia?, 163
- Nuclear nationalism, 162
- Nuclear Non-Proliferation Treaty, 378
- Nuclear Nonproliferation Treaty, 278
- Nuclear power generation, 190
- Nuclear power plant accidents, 146, 419
- Nuclear proliferation, 140, 201, 419
- Nuclear reactors, 201
- Nuclear terrorism, 162, 173, 175, 201, 202
- Nuclear tests, 144
- Nuclear threat greater today, 140
- Nuclear war, 9
- Nuclear warhead stockpiles, 209
- Nuclear wasteland, 165
- Nuclear weapons, 190, 271, 273, 306, 315
- Nuclear weapons an absolute evil, 283
- Nuclear weapons and terrorism, 140
- Nuclear weapons are genocidal, 377
- Nuclear winter, 147, 203
- Nuclear-weapon-free world, 283
- Nuremberg Principles, 176, 315, 373
- Oak leaves, 39, 40
- Obedience paramount, 131
- Oberg, Jan, 328, 330
- Ocean floors, 80
- Odd nucleon numbers, 158
- Oil and conflicts, 101
- Oil companies, 86
- Oil spills, 144
- Oil-hungry military, 85
- Older people marginalized, 359
- Orthodox Christians, 322
- Orwellian society, 33
- Osama bin Laden, 89
- Oslo Principles, 382
- Ottawa Treaty, 381
- Otto Hahn, 272
- Ottoman Empire, 185
- Over-reaction to 9/11, 349
- Overpopulation, 390, 394
- Overwrite ethical principles, 131
- Oxfam, 78
- Ozone layer, 148, 151, 174, 204
- Pacific ecosystems contaminated, 153
- Pacifism, 268
- Pack leader, 19
- Package of broadcasts, 360
- Pagan festivals, 39
- Pagan tradition, 39
- Pakistan, 34, 175, 202, 208
- Pakistan's nuclear weapons, 140, 151, 162, 166
- Palestinians, 142
- Pan-Slavic ambitions, 151
- Paralyzed by vetos, 418
- Paranoia, 140
- Paris Climate Agreement, 212
- Paris Climate Conference, 329
- Passive resistance, 229
- Patriotism, 21, 30, 41
- Paul Ehrlich, 148, 204
- Paul, James A., 85
- Pauling, Linus, 282

- Payoffs, 83
- PBS interview, 350
- Peace, 283, 317
- Peace dividend, 349
- Peace education, 313, 319, 323
- Peace in Colombia, 212
- Peace movement, 326
- Peace People, 306
- Peacebuilding, 418
- Peaceful means, 282
- Peacekeeping, 418
- Pearl Harbor, 213
- Peasant farmers, 74
- Peierls, Rudolf, 158
- Pembroke Lodge, 265
- Pentagon Papers, 117
- Pepper spray, 69
- Perfidious mass media, 356
- Permanent arms industry, 196
- Permanently uninhabitable, 152
- Permian-Triassic extinction, 356
- Perpetual growth, 232
- Perpetual war, 349, 350
- Persecution of Christians, 190
- Personal merit, 232
- Peru, 64
- Pforzheim destroyed, 137
- Philippines, 31
- Phoenix Farm, 232
- Photoelectric effect, 266
- Pictographic writing, 32
- Pilger, John, 330
- Pipeline protests, 69
- Pizarro, Francisco, 64
- Planned attack on Iran, 151
- Planned lifetimes exceeded, 163
- Plans for blockade, 186
- Plantations, 66, 92
- Plato, 32
- Playing fields of Eton, 312
- Plutonium, 154, 173, 201
- Poetry, 27
- Poison gas, 29, 87, 88, 245, 267
- Pol Pot, 125
- Politeness, 363
- Political action, 37
- Political chaos, 145
- Political cohesion, 34
- Political inactivity, 328
- Political influence, 196
- Political instability, 212
- Political institutions, 34
- Political justice, 323
- Political unity of France, 35
- Politicians, 278
- Politicians tell him to kill, 132
- Pollution, 390
- Poor families, 74
- Pope Francis I, 85, 312, 325
- Pope John Paul II, 324, 325
- Pope John XXIII, 325
- Population explosion, 315
- Population genetics, 23
- Population growth, 314
- Population stabilization, 393
- Positive peace, 316
- Post-Kantians, 37
- Postures, 31
- Poverty, 233, 314, 323, 418, 427
- Poverty and war, 144, 427
- Poverty-generating war, 143, 145
- Poverty-related causes, 350
- Powell, Cecil F., 282
- Power, 41
- Power struggles, 140
- Power unbalance, 317
- Powerful nations and oil, 85
- Pre-industrial Europe, 74
- Precious bodily fluids, 165
- Prehistoric trading, 31
- Preparation for war, 190
- Prescott Bush, 188
- President Truman, 139
- Preventable diseases, 141, 351
- Priests, 40
- Primary health care, 145

- Primitive state, 132
- Primitive tribes, 33
- Principia Mathematica, 259
- Principle of Equivalence, 267
- Printing, 34
- Private army, 68
- Private banks, 85
- Private consulting companies, 83
- Private life, 37
- Privileged position, 145
- Pro-American states, 87
- Problems related to science, 278
- Productivity, 73
- Profits from war, 349
- Progress, 65
- Progress of science, 317
- Prohibitively dangerous reactors, 159
- Proliferation risks, 152
- Propaganda, 326, 358
- Propaganda and entertainment, 360
- Propagandist drama, 41
- Propagation of genes, 30
- Protecting indigenous peoples, 63
- Protestants, 322
- Provisional Irish Republican Army, 306
- Proxy wars in the Middle East, 102
- Prussia, 35, 38
- Prussian army officers, 26
- Pseudospeciation, 26
- Psychological conditioning, 132
- Psychological effects of war, 141
- Psychological techniques, 39
- Pu-239 generated in reactors, 158
- Public education, 358
- Public health, 140
- Public opinion, 358
- Pugwash Conferences, 259, 274, 278, 319, 399
- Pugwash Secretary General, 279
- Pugwash, Nova Scotia, 278
- Pull it, 350
- Purposes of the United Nations, 389
- Putin, Vladimir, 9, 101
- Quakers, 324
- Quasi-automatic reaction, 166
- Quasi-religious attitude, 41
- Quasi-religious fervor, 39
- Quasi-religious worship, 41
- Rachael Corrie, 309
- Racial cleansing, 29
- Racial discrimination, 237
- Racism, 67, 382
- Racism of Cecil Rhodes, 68
- Radar, 171, 200
- Radiation sickness, 137, 146
- Radioactive cloud, 153
- Radioactive contamination, 79, 151
- Radioactive fallout, 140, 144, 274, 319
- Radioactive grass, 153
- Radioactive leaks at Hanford, 163
- Radioactive particles, 281
- Radioactive release kept secret, 164
- Radioactive wasteland, 163
- Radium, 271
- Rank-determining fights, 20, 21
- Rational thought banished, 131
- Rationality, 271
- Rats feeding on corpses, 137
- Raw materials, 65
- Raytheon, 209
- Real threats, 357
- Rearmament, 190
- Recovery of the U.S., 68
- Red button, 165
- Red Cross targeted, 136
- Red Dawn, 213
- Redemptive love, 237
- Reducing nuclear dangers, 278
- Reform Jews, 322
- Reformed teaching of history, 396
- Reformed UN voting system, 420
- Refugees, 142
- Regional Defense Strategy, 208
- Reichstag election, 1933, 190
- Reinvestment, 66, 92

- Relativity theory, 266
- Religion, 26, 39, 65, 316, 327, 396, 397
- Religion and culture, 29
- Religion and ethnicity, 29
- Religious ethics, 315
- Religious tolerance, 230
- Remember your humanity, 278, 280, 282, 399
- Renewable energy, 101, 145, 356
- Renewable energy infrastructure, 318
- Reporting climate change, 358
- Reprocessing, 173, 201
- Reprocessing fuel rods, 158
- Republicanism, 37
- Resolution 678, 88
- Resource curse, 82, 145, 427
- Resource Wars, 426
- Resource wars, 85, 100, 145, 216
- Resource-extracting firms, 82, 145
- Revelations of misconduct, 165
- Revenge, 41
- Revenge and counter-revenge, 169, 176, 198
- Reverential attitude, 41
- Revolution in nuclear nations, 162
- Rhodes' secret society, 68
- Rhodes, Cecil, 68
- Rigged elections, 83
- Right to life, 377
- Right-wing nationalism, 86
- Right-wing parties, 189
- Righteousness, 22
- Rights of Mother Earth, 383
- Risking human future, 79
- Ritual scarification, 26
- Rituals, 27
- River of money, 196
- Robock, A., 174
- Role of the media, 358
- Roman Catholic Church, 190
- Roman Catholics, 322
- Roman Empire, 312
- Romantic Movement, 34
- Rome Treaty, 315
- Roosevelt, Franklin D., 136
- Rosa, Antonio C.S., 330
- Rotblat, Joseph, 274, 279, 282, 295
- Rothschild, Nathan, 68
- Rotterdam devastated, 136
- Round dance, 17
- Rumsfeld, Donald, 88
- Ruskin, 232
- Russell, Lord Bertrand, 258, 274, 282, 319
- Russell, Lord Conrad, 265
- Russell, Lord John, 258
- Russell-Einstein Manifesto, 259, 273, 274, 278, 280, 319, 399
- Russia, 65, 173, 185, 201, 208
- Russia's nuclear forces, 9
- Russia's understandable fears, 10
- Russian invasion of Ukraine, 9
- Rwandan genocide, 33
- Sacred duty, 22, 41
- Sacred flame, 39, 40
- Sacred space, 40
- Sadam Hussein, 205
- Saddam attacks Iran, 87
- Saddam Hussein, 87, 90
- Saddam Hussein's atrocities, 29
- Safe drinking water, 145
- Safe water, 141
- Safety rules, 165
- Sagatom Saha, 100
- Saha, Sagatom, 100
- San Francisco Conference, 387, 417
- Sanctions, 394
- Sanctions against Iraq, 89
- Sanctions unjust and ineffective, 420
- Sanitary water supplies, 419
- Sanitary water supply, 141
- Sarin, 87
- Sassoon, Siegfried, 248
- Satyagraha, 230
- Saudi Arabia, 86, 87
- Scandinavia, 33, 392
- Schrade, Herbert, 40
- Science double-edged, 390

- Science education, 315
- Science-based industries, 64
- Scientists, responsibility of, 315
- Scotland, 78
- Sea level rise, 80
- Sea of fire, 137
- Seabed, 80
- Search for life's meaning, 226
- Secret society, 68
- Security, 323
- Security checks, 350
- Security Council, 88, 206, 372
- Segregation, 234
- Self-destruction, 21
- Self-interest, 73, 78
- Self-reliance of villages, 233
- Self-sacrifice in war, 30, 131
- Self-sacrificing courage, 22
- Selfish motives, 21, 22
- Selfishness, 82
- Selfishness is exalted, 78
- Sellers, Peter, 165
- Selling wars and weapons, 356
- Senate, 423
- Sense of responsibility, 131
- Senseless rituals, 131
- September 11 attacks, 89, 349
- Serbian nationalists, 357
- Settlement of disputes, 282
- Several hundred million deaths, 169, 198
- Severe droughts, 148, 204
- Sex, 83
- SGI, 283
- SGI Denmark, 295
- SGI's Nordic Cultural Center, 295
- Shah of Iran, 83, 87
- Shamanism, 25
- Shared knowledge, 32
- Sharing, 82
- Sharp-shooters, 40
- Sheep-dogs, 19
- Shelley, Percy Bysshe, 259
- Shi'ite Muslims, 322
- Shi'ite regime, 87
- Shi'ites slaughtered, 89
- Shintos, 322
- Shiver, 22
- Siberia, 25
- Siegfried Sassoon, 245
- Sigmund Freud, 268
- Sikhs, 322
- Silverstein, Larry, 350
- Sinister double meaning, 158
- SIPRI, 209
- SIPRI Yearbook, 2017, 212
- Slaughter of civilians, 136
- Slave laborers, 188
- Slave-like politicians, 79
- Slavery, 398
- Slavic majorities, 39
- Small agricultural communities, 232
- Small arms, 206
- Small arms, 639 million, 206
- Smallpox, 63, 65, 379
- Smith, Adam, 73
- Smith, Dan, 212
- Smoking ruins, 74
- Social cohesion, 25
- Social competition, 233
- Social conscience, 82
- Social Darwinism, 68
- Social Democrats, 190
- Social disruption by war, 141
- Social goals, 78
- Social impact of science, 315
- Social insects, 31
- Social justice, 78
- Social scientists, 278
- Social unit enlarged, 32
- Socrates, 32
- Softening ethnic boundaries, 29
- Soka Gakkai, 283
- Soka Univ. of America, 329
- Soka University Japan, 295, 329
- Solstice, 39
- Somalia, 205, 206

- Sonya Bers, 225
- South Africa, 230
- South Africa's nuclear weapons, 162
- South America, 65, 79
- Southern Asia, 31
- Southwest Asia, 208
- Sovereign states, 143
- Sovereignty, 34
- Soviet atomic bomb, 139
- Soviet-style revolution, 189
- Space-age science, 41
- Space-time symmetry, 267
- Special interest groups, 78
- Special relativity, 266
- Specialization, 32
- Specialized workshops, 279
- Species, 26
- Spinning machines, 74
- Spinning wheel, 233
- Spiritual influence, 196
- Stable future, 140
- Standing Rock, 70
- Stanley, Henry Morton, 65
- START treaties, 278
- Starvation, 141, 142, 150, 206
- Starvation and disease, 419
- Stassen, Harold, 387
- State, 37, 38, 41
- State Militia, 317
- State Secrets Act, 153
- State-sponsored terror, 132
- Steam engines, 74
- Steel, 65
- Stirred-up Muslims, 90
- Stone, Oliver, 328, 330
- Stone-age politics, 41
- Stonehenge, 40
- Stop threatening Russia, 10
- Straits of Hormuz, 166, 357
- Strategic competition, 212
- Strip-searched, 70
- Stronger bargaining power, 145
- Student peace prizes, 319
- Submission, 20
- Subnational organizations, 162
- Subsidiarity, 424
- Subsidized nuclear power, 153
- Success of federations, 422
- Sudan, 205
- Suffering caused by poverty, 145
- Suffering caused by war, 145
- Suicidal nuclear war, 9
- Suicide, 76
- Suicide by soldiers, 131
- Sunni Muslims, 322
- Superbombs, 139
- Superpower status, 208
- Survival, 23, 280
- Survival of the fittest, 325
- Sustainability, 78
- Sustainable economic system, 319
- Swadeshi movement, 233
- Swiss federation, 422
- Swiss Patent Office, 266
- Switzerland, 314
- Sykes-Picot Agreement, 87
- Symbolism, 39
- Symbols of power, 358
- Syria, 205
- Syrian war, 100
- System of despotism, 68
- Systematic murder, 68
- Szent-Györgyi, Albert, 33, 399
- Tabun, 87
- Taiwan, 31
- Tanks, 186
- Targeted individuals, 216
- Tattoos, 27
- Taxation, power of, 316
- Teacher's training colleges, 315
- Team-spirit, 21
- Technical defects, 171, 200
- Technology, 34, 41, 65, 325
- Television, 326
- Television part of education, 359

- Television underestimated, 359
- Temperature inversion, 148, 203
- Temple Massacre, 64
- Tenant farmers, 74
- Terp, Holger, 295, 322, 344
- Terrorism, 136, 208, 323
- Terrorism an invented threat, 351
- Terrorism risks, 152
- Terrorism, nuclear, 173, 201
- Test Ban Treaty, 278
- Textbooks for peasants, 225
- Textile mills, 74
- TFF, 328
- Thailand, 31
- Thales Group, 209
- The Guardian, 358
- The Kingdom of God, 227
- The Monroe Doctrine, 10
- The power of truth, 230
- The Telegraph, 68
- The True Believer, 131
- The Wealth of Nations, 73
- Theme days, 316
- Theologians, 35
- Theology studies, 315
- Thermite, 350, 351
- Thermonuclear catastrophe, 328
- Thermonuclear reactions, 139
- Thermonuclear war, 278, 318, 329, 356, 357, 390, 396
- Thermonuclear weapons, 21, 34, 102, 146, 324, 363
- Third World debt, 85
- Thirty Years' War, 186
- Thou shalt not kill, 325
- Threat of nuclear war, 146
- Threat or use of force, 389
- Threats and costs of war, 140
- Threats to civilization, 78
- Threats to the biosphere, 78
- Thusnelda, 41
- Thyroid cancer, 153
- Thyssen family, 186
- Thyssen, August, 186
- Thyssen, Fritz, 186, 189
- Thyssen-controlled bank, 189
- Tinbergen's studies of instincts, 17
- Tinbergen, Nikolaas, 16
- Tipping points, 356
- Titanic, 80
- Tobin tax, 372, 414, 421
- Tobin, James, 372, 414
- Toda Declaration, 283
- Toda Institute of Peace, 329
- Toda, Josei, 283
- Tokyo firebombed, 137
- Tokyo, firebombing, 169, 198
- Tolstoy, 225, 230, 232
- Tolstoy Farm, 232
- Tolstoy, Count Leo, 397
- Tom Cruse, 213
- Toon, O., 174
- Top Gun, 213
- Torture, 67, 68, 281
- Total destruction of Hamburg, 136
- Total global supremacy, 208
- Totalitarianism, 38
- Towards a Non-violent Society, 322
- Trade, 34
- Trade unions, 190
- Trading with the enemy, 188
- Traditional duties, 74
- Traditional rights, 74
- Traditional societies, 359
- Trafalgar Square, 274
- Tragically self-contradictory, 152
- Training of soldiers, 131
- Transnational Foundation, 330
- Transportation, 34
- Treaty of Versailles, 189
- Trench warfare, 21, 245
- Trevada Buddhists, 322
- Tribal consultation, 70
- Tribal identity, 33
- Tribal instincts, 35
- Tribal markings, 25, 26, 33

- Tribal religions, 32
- Tribalism, 21–23, 30, 32, 33, 37, 132, 327, 392, 397
- Tribes, 25, 41
- Trickle-down theories, 325
- Triggered by a madman, 166
- Triggered by error, 166
- Trinity College, Cambridge, 259, 265
- Triple Alliance, 185
- Triple Entente, 185
- Tropical regions uninhabitable, 80
- Trump, Donald, 70, 212
- Truth, 33, 230
- Truthout, 328
- TTAPS Study, 147, 203
- Turco, R., 174
- Tutu, Desmond, 306
- Two billion risk starvation, 205
- Two faces of Janus, 33

- U-235, 154
- U-boats, 186
- Uexküll, Jakob von, 329
- Ukraine, 79, 85
- Ukraine invasion not unprovoked, 9
- Ukraine War, 9
- Ultracentrifuges, 158
- UN Development Programme, 417
- UN General Assembly, 170, 171, 198, 200
- UN High Commission for Refugees, 326
- UN Security Council, 206
- UN's Agenda 2030, 212
- Unauthorized act, 173, 201
- Undemocratic government, 82
- Unemployment, 233, 317
- Unenriched uranium, 146
- Unequal distribution of incomes, 66, 92
- UNESCO, 326, 371, 387, 417
- Unfair agreements, 145
- Uniforms, 40
- Unilateral acts of kindness, 230
- Union of human souls, 229
- United Kingdom, 185, 208
- United Nations, 66, 327
- United Nations Charter, 143, 176, 278, 315, 370, 387
- United Nations Day, 319
- United Nations Emergency Force, 395
- United Nations reform, 278, 423
- United Nations television channel, 401
- United States, 25, 65, 66, 92, 173, 185, 201, 208, 314
- United States Constitution, 366, 414
- United Technologies, 209
- Universal death, 278, 281, 282
- Universal Declaration of Human Rights, 375
- Universal human brotherhood, 29, 315
- Universality of religion, 29
- University for Peace, 329
- University peace education, 329
- Unknowing human guinea pigs, 164
- Unlimited growth, 323
- Unlimited material needs, 323
- Unto This Last, 232
- Unwarranted influence, 196
- Uranium, 272
- Uranium-235, 146
- Urinating on Afghan corpses, 349
- US backed coup, 87
- US Federal Government, 317
- US sanctions target Iraq's water system, 96
- USSR's civilian deaths, 150

- Vaccinations prevented, 89
- Value systems, 27
- Value-Creating Education, 283
- Values from the mass media, 359
- Van Gogh, Vincent, 76
- Variations of instincts, 15
- Vast proportions, 196
- Vast river of money, 78
- Veils, 27
- Venezuela, 86
- Versailles, 35
- Veto power, 372
- Vicious circle, 190

- Victims of war, 418
- Viet Nam War, 235
- Vietnam, 31, 144
- Vietnam War, 115
- Vikings, 33
- Village life, 233
- Violence, 20, 41, 227, 269
- Violence on television, 21
- Violent competition over resources, 100
- Violent death, 142
- Violent team sports, 21
- Vladimir Putin, 9, 101
- Voluntary poverty and humility, 232
- Voting system of the UN, 417
- Voyage of the Beagle, 63
- Vulnerability of modern society, 323

- Waggle dance of bees, 16
- War, 41, 206, 306, 314, 324, 377, 387
- War against Iraq, 351
- War against terror, 349
- War and Christianity, 227
- War and Peace, 226
- War as an institution, 196, 392
- War crimes, 381
- War is now prohibitively dangerous, 313
- War of subjugation, 39
- War on Terror, 350
- War, unbridled, 41
- War-addicted economy, 78
- War-free world, 280, 316, 319
- War-related industries, 419
- Warm human contacts, 232
- Wars block development, 145
- Wars of religion, 29
- Washington Naval Treaty, 185
- Wasserman, Harvey, 153
- Wastefulness, 314
- Water conflicts in the Middle East, 100
- Water purification facilities, 143
- Water system attacked during Gulf War, 96
- Waterbourne diseases, 144
- Wave of oil, 87

- We Were Soldiers, 213
- Wealthy countries, 145
- Wealthy families, 83
- Weaponry, 65
- Weapons destabilize regions, 145
- Weapons of mass destruction, 21
- Weapons systems and oil, 85
- Weapons-usable plutonium, 163
- Weaving machines, 64, 74
- Wellington, 41
- West's thirst for oil, 87
- Western Europe, 208
- Wheeler, John A., 158
- Whitehead, Alfred North, 259
- Why War?, 268
- Widespread general war, 166
- Wilfred Owen, 245
- Will, 38, 50
- Williams, Betty, 306
- Willingness to kill, 30
- Wilson, E.O., 23, 30
- Wiretappers, 33
- With hands on our hearts, 312
- Wittgenstein, Ludwig, 259
- Wives of Belgian miners, 76
- Wolfowitz Doctrine, 208
- Wolves, 19
- Women and children, 136, 137
- Women's rights, 393
- Worked to death, 67
- Workers' rights, 424
- World arms spending, 141
- World Association of World Federalists, 417
- World citizenship, 313
- World Conference of Religions for Peace, 322, 324
- World Constitutional Convention, 413
- World domination, 68
- World federal authority, 317
- World Federalism, 413
- World Future Council, 329
- World government, 316

- World Health Organization, 141, 326, 371, 387, 391, 417
- World of Warcraft, 216
- World trade, 64
- World Trade Center, 89, 163, 175, 350, 351
- World Trade Center, 2001, 202
- World under British rule, 68
- World War I, 87, 136, 150, 152, 185, 187, 190, 393
- World War II, 136, 143, 147, 150, 186, 203, 278, 283, 349, 387, 414, 417
- World War III, 30, 166, 350
- World Wars, 34
- World-destroying war, 151, 152
- Worse than wasted, 145
- Worship of free market, 82
- WWII damages Soviet's dams, 95
- Wynner, Edith, 395

- Xenophobia, 327

- Yasnaya Polyana, 225
- Yokohama firebombed, 137
- Yonbion Research Center, 209
- YouTube, 360
- Yukawa, Hideki, 282

- Zanzibar, 65
- Zbigniew Bryzinski, 90
- Zimbabwe, 206
- Zionism, 29
- Zoroastrians, 322