The WORLD of 1492

WHY, YOU MAY WONDER, are we now presenting a wall chart for the 500th anniversary of Columbus's voyage to America? After all, the Quincentenary doesn't officially start until October 1992.

Actually, plans for the Quincentenary have been in the works since the mid-'80s. More than 20 countries and 100 organizations are planning parades, pageants, and educational programs to mark the voyage that changed the world. And a raging debate over Columbus's legacy is already making headlines.

On the last big milestone of Columbus's voyage, in 1892, Americans joyously celebrated the "discovery of the New World." But on Quincentenary eve, people are taking a more critical look. Native Americans, for instance, say that Columbus didn't discover America—their own ancestors did. African-Americans trace the great revival of slavery to Columbus. And environmentalists blame him for setting in motion a 500-year assault on the continent's ecosystem.

The legacy of Columbus is, in fact, multifaceted and complex, reaching to the very roots of who we are as a nation and a people. For this reason, the Quincentenary marks an unparalleled opportunity to look at history with fresh eyes—and to teach and to learn about geography, the encounter of cultures, and the spirit of exploration.

Over the next year, Scholastic's classroom magazines will devote articles and special issues to the Columbian legacy. This teaching kit is designed to help you put that legacy into context—and to launch your own voyage of discovery, with your students.

About Our Map

- To place Columbus's first voyage in a multicultural, global context, the map shows the empires, kingdoms, and cultures of Asia, Africa, and the Americas, in addition to the major nations of Europe in 1492.
- World maps of Columbus's time were to an extent works of the imagination. Colorful symbols of sea monsters, ships, exotic animals, people, and plants were used to fill in gaps in knowledge and to appeal to a sense of adventure.
- Our map uses such symbols to echo the style and vision of the world of 1492 against modern outlines of islands, and continents.
- Boundaries shown for most nations outside Europe in 1492 are approximations.
- Sources used for the map include *Europe 1492* by Franco Cardini (Facts on File, 1991), *The Times Atlas of World History* (London Times Books, 1978), *Atlas of World History* (Rand McNally, 1988), *Man's Journey Through Time* (Simon & Schuster, 1974), *Admiral of the Ocean Sea* by Samuel Eliot Morison (Little, Brown, 1942), *Christopher Columbus: Voyager to the Unknown* by Nancy Smiler Levinson, (Dutton, 1990).

Classroom EXPL

Teaching Tips for Lessons, Activities, and Research Projects

The "discovery" of the New World by Christopher Columbus had an enormous historical impact. It led to great movements of people and to clashes between cultures. It also led to an exchange of plants and animals between the New World and the Old.

In general, Europeans benefited from the "discovery," whereas native Americans and people of African origin often suffered because of it. To highlight the multicultural aspects of the Quincentenary, this wall chart presents the societies, cultures, and empires of The World of 1492.

You might want to discuss why descendants of the different groups would view the 500th anniversary of Columbus's first voyage differently.

Reproduce panels 4-5, 6, 7, and 8 for distribution to your students. Classes in social studies, language arts, science, modern Spanish, and interdisciplinary programs can use the map and reproducibles for lessons, activities, and research projects on the Age of Discovery and its consequences.

1 WORLD OF 1492: Countries outlined in [blue] on the map on the front of the chart were well-known to Columbus and other Europeans. Countries outlined in [green] were known to them through travelers' tales, writings, and rumors. Countries outlined in [red] were unknown to Columbus and other Europeans. Discuss: When did the "unknown" countries become known to Europeans? What happened to these countries as a result?

2 LOCATION OF EMPIRES: When all students have read the brief descriptions of the leading empires, panels 4-5, ask individual students to locate the empires on the front of the chart. Assign different empires to groups of students for further research. Have each group report on the status of its empire in 1492. What form of government did it have? How did people live there? What were that empire's most noted achievements? What present-day country or countries occupy the area of the 1492 empire? Do its traditions survive?

3 POPULATIONS THEN AND NOW: The world's population in 1492 was around 400 million. About 56 million people lived in Europe, around 100 million in China, and 100 million in India. The population of the Americas was relatively small. Mexico and Central America had an estimated 15 million people. North America above Mexico had about 2 million. The population of the Inca empire was about 6 million. Have students research today's population figures and compare them with those of 1492. Have them plot patterns of change—particularly in Europe and America—since 1492. Ask: Which of the two continents has experienced the greater population growth since 1492?

4 PEOPLE OF NORTH AMERICA: Nearly 2 million people of many customs, cultures, and languages lived in what are now the U.S. and Canada. Because of Columbus's geography mistake, they were all called Indians and lumped together as one people. But they were as varied as the peoples of Europe and Asia. They lived in clans, tribes, and confederations of tribes. Students are likely to have heard of many of the tribal groups reviewed on panel 6. Students can "adopt" tribes and do more research to find out where particular tribes lived and what they did in 1492. Were they farmers or primarily hunters/gatherers? How did their home region influence the way they lived. Where do these tribes live today and what do they do? What tribes are they related to by language and custom?

ORATIONS

5 ECOLOGICAL IMPACT: Columbus's encounter led to great exchanges between the old and new worlds. Some of these exchanges were deliberate. Some were accidental. Many were beneficial. A few were disastrous. "Seeds of Change," a current exhibit at the Smithsonian Museum of Natural History, highlights five examples: the horse, smallpox, the potato, maize (corn), and sugar. Discuss the impact of each on the world that received it. Have students list other plant, animal, and disease exchanges, and discuss their effects.

For further teaching information about the impact of the "Columbian Exchange," see *The Columbian Voyages, the Columbian Exchange, and their Historians* by Alfred W. Crosby, American Historical Association, 1987.

6 SPANISH LEGACY: The largest Spanish-speaking population in the world today is in the Americas. This is a direct result of the achievements of Columbus (Cristóbal Colón) and other Spanish explorers of the New World. Have students identify Spanish-speaking countries on a modern map of the Americas. Spanish place names are numerous in the U.S. Have students list as many as they can think of. Discuss what the place names mean and their origins.

7 MAP SKILLS: The map on panel 8 shows the route most historians believe Columbus took across the Atlantic in 1492. It is based on studies of Columbus's diaries, ocean currents, and trade winds. The route was sketched out in 1892 for the 400th anniversary of Columbus's first voyage. During 1939-40, Samuel Eliot Morison, John McElroy, and Albert Harkness Jr. of the Harvard Columbus Expedition sailed the route, matching Columbus's observations of sunsets, star positions, birds, winds, weather, and sea weeds as described in his log. For a translation of Columbus's log, see *The Diario of Christopher Columbus's First Voyage*, edited by Oliver Dunn and James E. Kelley, University of Oklahoma Press, 1988.

Have students trace and discuss the major steps on Columbus's first trans-Atlantic voyage.

Pose the following questions:

Why did Columbus pick the Canary Islands as a departure point for his voyage across the Atlantic? (Maps of the time showed Japan to be directly west of the Canaries on the same latitude.)

Where did he think he was going? (Japan)

What modern country was the site of Columbus's landing on October 12, 1492? (The Bahamas)

DEEPER ENCOUNTERS: BOOKS ABOUT COLUMBUS

Traditional Views

Hundreds of books have been written about Columbus and his voyage across the Atlantic. Two of the best known are *The Life & Voyages of Christopher Columbus* by Washington Irving, which has been reprinted many times, and *Admiral of the Ocean Sea* by Samuel Eliot Morison, generally available in libraries.

These two classics as well as most books for young readers present a fairly heroic view of Columbus. They show the widely accepted route of his first voyage, mapped by Admiral Samuel Eliot Morison and presented on panel 8.

Some recent books of interest for young readers include:

Christopher Columbus, Mariner by Samuel Eliot Morison, (paperback reprint), NAL 1991.

Columbus and the Age of Exploration by Ken Stott, Bookwright Press 1985.

Christopher Columbus on the Green Sea of Darkness by Gardner Soule, Watts 1989.

Columbus and the World Around Him by Milton Meltzer, Watts 1990.

Alternate Views

In recent years, several books, TV programs, and magazine articles have challenged the traditional, heroic views of Columbus and his achievement.

The Conquest of Paradise by Kirkpatrick Sale (Knopf 1990) presents a stinging criticism of Columbus's voyage in terms of its impact on the peoples and environment of the Americas.

Conquest of Eden by Michael Paiewonsky (Mapes Monde 1990) offers a critical view of Columbus's second, third, and fourth voyages. It recounts the greed and destruction that marked the encounter of two cultures.

Magazine articles critical of Columbus include "What Columbus Discovered" by Kirkpatrick Sale, *The Nation*, October 22, 1990; and "Questions of Conquest" by Mario Vargas Llosa, *Harper's*, December 1990.

An alternative to the traditionally accepted route of Columbus's first voyage is offered in *Westward With Columbus* by John Dyson, Scholastic 1991. Dyson sailed with Luis Coin across the Atlantic aboard a replica of the Niña. They followed a more southerly route based on Coin's theory that Columbus had a secret map. It's an interesting idea and the book is appealing, but Dyson's route is not likely to replace the traditional one.

Both the traditional and alternate views can stimulate lively classroom discussions and research projects.

The GREAT EMPIRES of 1492

AFRICA

SONGHAI: The Songhai tribes along the Niger river in central Africa joined the Muslim kingdom of Mali around the year 1200. Timbuktu, capital of Mali, was a great center of learning and trade at the time. However, Mali started to fall apart in the 14th century, and the Songhai organized their own empire and absorbed much of Mali culture. In 1486, the expanding Islamic Songhai empire took over Timbuktu, founded a university there, opened new trans-Saharan trade routes, and became successor in many ways to the former kingdom of Mali. By 1492, the entire Niger river region (present-day Gambia, Senegal, Burkina Faso, Guinea-Bissau, Guinea, Mali, Niger, Nigeria, and part of Chad) was united under Songhai rule. The population was around 4 million.

ZIMBABWE: Around 900 A.D., a metal-using people of eastern Africa, called the Shona, moved to a region of south-central Africa in search of minerals. They found gold, copper, and zinc deposits. So they settled in, mined and refined the metals, and ruled over the primitive farmers who had been there for centuries. By trading metal items throughout Africa, the Shona prospered and built a city of huge stone slabs. They called it Zimbabwe, which means "house of stone" in the Shona language. It became the capital of a great empire that expanded and contracted several times. At its peak, it had about 2 million people.

In 1492, the city of Zimbabwe was a very influential religious and trading center in southern Africa. The city (whose mighty ruins can still be seen) awed visitors from far and wide with its power and wealth.

AMERICAS

AZTEC EMPIRE: The Aztecs were originally a poor wandering tribe in an area that straddled present-day Arizona, Nevada, New Mexico, and northern Mexico. In the 14th century, they moved south into the Valley of Mexico and conquered the civilized tribes there. They absorbed the knowledge and culture of the peoples they conquered. Around 1325, they built the capital city of Tenochtitlán (now Mexico City).

At the time of Columbus's first voyage, the Aztec empire had about 12 million inhabitants. It was close to its peak of power and wealth. Aztec achievements in astronomy, mathematics, art, architecture, engineering, agriculture, and music were very advanced. However, the Aztecs were feared, disliked, and distrusted by most of their Central American neighbors. They waged many wars and sacrificed thousands of prisoners each year to their gods. When Spanish adventurers arrived in the early 16th century, people of the region aided the Spaniards in the destruction of the Aztec empire.

INCA EMPIRE: Thousands of years ago, the Inca culture flourished in the area that is now Ecuador. Early Incas developed advanced methods of agriculture and construction. Around 1200 A.D., a leader named Manco Capac led them south to richer lands, and the Inca empire was born. Over the years, Inca society greatly improved the science of metalworking, architecture, mathematics, astronomy, and surgery.

By 1492, the Inca emperor ruled over 6 million people, in an area running along the western part of South America from northern Ecuador to southern Chile. A large bureaucracy helped administer the empire. In fact, the empire was one of the most highly organized nation-states of the time. A network of highways enabled the rulers to keep tight military, social, and economic control over the country.

Ordinary Incas had to pay taxes, serve in the army, and take turns repairing the empire's good system of roads and bridges. In return they were guaranteed freedom from extreme want. Terraced fields, irrigation canals, and hardy crops made Inca agriculture very productive. The government stored food for hard times in large stone warehouses. Incas who couldn't work because of sickness or old age received assistance.

ASIA

JAPAN: When Columbus sailed westward across the Atlantic in 1492, the ancient island empire of Japan was his destination. Maps of the time showed Japan to be about 2,700 miles west of the Canary Islands (Columbus's departure point) on the same latitude. Columbus carried with him a description of Japan.

written by the Venetian explorer Marco Polo around 1294. Polo wrote that the king of Japan "has a mighty palace roofed with gold. . . . The windows are decorated with gold. . . . Pearls are abundant." Columbus might have been disappointed if he had reached Japan in 1492. Though the country had an advanced civilization, it was not very wealthy. There was no strong central government from 1467 to 1580, and the country was split apart by feuding families. The most important people in a population of around 10 million were the *samurai*, members of a warrior class.

MING EMPIRE OF CHINA: For centuries China, home of the world's oldest civilization, was a mighty empire protected by a great wall. But the wall failed to deter Mongols from the north, and China was conquered in 1280. A period of harsh Mongolian occupation lasted until 1367. Then, the Chinese empire slowly recovered its former power under the popular Ming dynasty. In the 15th century, the Ming rulers encouraged small-farm agriculture. They built dams to control flooding and canals to aid transportation. The population grew from around 60 million in 1370 to more than 100 million in 1492. Despite attacks by Japanese pirates, trade expanded in coastal cities and along the great rivers. Cotton, silk, jade, tea, and rice were exported to other parts of Asia.

OTTOMAN EMPIRE: Linking Asia and Europe, the Ottoman Empire was one of the world's greatest powers in 1492. The Ottomans were members of a Turkish tribe from central Asia that migrated to southwest Asia in the 13th century. Along the way, they converted to Islam. The Ottoman Turks were a military people used to hardship and strict discipline. In the 14th and 15th centuries, they defeated Mongols, Arabs, and European Christians. They whittled away the once-mighty Byzantine Empire, and in 1453 captured its capital, Constantinople. This gave the Ottoman Empire control over the straits linking the Black Sea to the Mediterranean Sea. From this base, the Ottomans pushed westward into Europe. By 1492, they had occupied most of the Balkan nations and were locked in a long war against Venice.

EUROPE

GENOA: Columbus's birthplace, Genoa, was an ancient city that developed into a semidemocratic republic in the 10th century. Then it prospered as a great seafaring power. By 1492, however, the Republic of Genoa was in decline. Like its rival, Venice, Genoa had lost its valuable trade routes to the Far East as a result of the fall of Constantinople to the Ottoman Turks in 1453. Many of its best sailors, including Christopher Columbus, moved west to work for Spain or Portugal. At home, rival political factions created turmoil. France, Milan, and other outside powers interfered in Genoan affairs, and the decline continued.

SPAIN: In 756 A.D., Muslim Moors and Berbers from North Africa invaded Spain, formerly a Roman province. They conquered most of the country, except for a few small Christian kingdoms in the north. The Christian kingdoms united and steadily drove the Muslims into the southern part of the country. By the 1470s, Spain was divided into the large Christian kingdoms of Castile and Aragon, and the small Muslim kingdom of Granada in the south.

When John II of Aragon died in 1479, his son Ferdinand, who was married to Queen Isabella of Castile, ceeded to the throne. Castile and Aragon united to form the Kingdom of Spain. Granada was conquered in 1492, and Jews and Muslims were driven out of the country. When Columbus opened up a New World, Spain, with a population of about 6 million, embarked on a period of great imperial expansion.

VENICE: In the 5th century A.D., groups of Romans fleeing from invaders took refuge on some small islands off the northeast coast of Italy. The island communities grew. And in 695, they united, elected a leader, and formed the Republic of Venice.

By the 13th century, Venice was one of the great powers of Europe. Venetian galleys sailed into the Black Sea and the great rivers of Asia. Venetian overland traders went to Peking, Delhi, and other commerce centers of Asia. Venetian colonies and outposts dotted the eastern Mediterranean. The city itself was a leader in music, fashion, and the arts. The fall of Constantinople to the Ottoman Turks in 1453 changed that. Venetian trade was badly hurt. The Republic became locked in a series of costly wars with the Ottoman Empire. Democracy declined at home. Venetian sailors, traders, bankers, and scholars moved west. And Venice's loss became Spain, and Portugal's gain.

Unknown to Columbus, great civilizations were flourishing in Africa, the Americas, and Asia . . . as well as in Europe.

The PEOPLES of NORTH AMERICA

The vast area of North America above the Aztec empire was home to nearly 2 million people around 1492. Because of Columbus's geography mistake, they were called Indians. But they were as varied as the peoples of Europe and Asia, and they spoke more than 300 different languages. Here's a look at major tribal groups with common language and culture roots.

ALGONQUIN: Before the arrival of Europeans, many tribes sharing the Algonquian language and culture lived in what is now eastern Canada and the U.S. coastal region down to Maryland. They included the Algonquin, Abnaki, Micmac, Montagnais, Massachuset, Mahican, Penobscot, Wappinger, and Delaware tribes. These woodland dwellers engaged in hunting, fishing, and small-scale farming. They lived in dome-shaped dwellings of bark.

APACHE/NAVAHO: Apache and Navaho tribes shared the Southern Athapascan language, similar religions, and a desert way of life in what is now the U.S. Southwest. Both were warrior peoples who fought each other and most outsiders. They hunted, gathered roots and berries, and farmed corn, beans, and squash. Most lived in dwellings of stone, logs, and adobe.

CREE: In 1492, this tribal group was scattered over a large area of north-central Canada. It still is. The language of the Cree is related to Algonquian. The Cree were hunters and trappers in a region that was snow-covered for most of the year. They made extensive use of skins and furs for clothes and dwellings. They developed the use of snowshoes and sleds.

CREEK: The Creek confederacy included Creek, Cherokee, Choctaw, and Chickasaw tribes in an area that now includes Georgia, Tennessee, Alabama, Mississippi, and the Carolinas. They shared the Hokan-Siouan language and an advanced, settled culture based on intensive agriculture and town communities. European settlers called them "the civilized tribes." But they were devastated by smallpox in the 18th century, and driven westward by white settlers in the 19th century.

IROQUOIS: The Iroquois Confederacy that existed from the 15th to the 18th centuries included the Mohawk, Oneida, Onondaga, Cayuga, and Seneca tribes. They shared the Iroquoian language and a culture adapted to life in the eastern woodlands. They lived in bark-covered longhouses within palisaded villages. The men hunted and the women raised corn, squash, tobacco, and beans. Women were given equal voice with men in the political councils that were an important part of Iroquois culture. The confederacy was torn asunder in the 18th century, as tribes took different sides in the French and Indian Wars. Some Iroquois now live in New York, Wisconsin, and Canada.

NEZ PERCÉ (SAHAPTIN): Some members of the Penutian-speaking tribes in the region that is now Idaho, Oregon, and Washington wore nose jewelry. So, French explorers called them Nez Percé (pierced nose). They called themselves Sahaptin. Living in communal longhouses near riverbanks, they fished for salmon and gathered roots and berries. On first contact with white people, they welcomed Christianity and book-based education. But when they were displaced by waves of settlers in the 19th century, they fought back under Chief Joseph.

SIOUX (DAKOTA): The Sioux were bison (buffalo) hunting tribes of the Great Plains. They were a friendly, hospitable people who waged war only as a last resort. Their own name for themselves, *Dakota*, means friends. They spoke various dialects of the Siouan language, and generally lived in tepees—tents of animal skins supported by poles. Before the introduction of horses to the New World, they hunted the bison on foot, using traps and stampedes to kill the animals. With horses, they achieved a fairly high standard of living, until the bison herds disappeared.

TLINGIT: The Tlingit and related peoples lived in coastal areas of what is now Oregon, Washington, and British Columbia. Today, they are remembered as the "totem pole makers." They lived in villages of wooden row houses facing the sea. They were master woodcarvers and made elaborate totems representing people, plants, and animals. They carved huge, oceangoing dugout canoes from the giant trees in their region.

UTE: This large tribe of the Uto-Aztecan language group lived in what is now Utah and Colorado. Primarily hunters and warriors, they were closely related to the Shoshoni, Comanche, and Paiute tribes. White settlers called them "Digger Indians" because they dug in the soil for edible roots, grasses, and small animals. Proud and independent, Utes, Paiutes, and Comanches fiercely resisted the advance of outsiders.

TIMELINE

Events Leading to Columbus's Voyages

1450

1451: Christopher Columbus, son of a weaver, is born in the Republic of Genoa, northern Italy. Genoa is a major trading nation, with hundreds of ships and outposts from Spain to Central Asia.

1452: Johannes Gutenberg, the German inventor, prints the Bible. This marks the first large-scale printing with movable type since Gutenberg invented the process in 1437. Printing helps spread books about other lands — such as Ptolemy's *Geography* and Marco Polo's writings — throughout Europe.

1453: The capture of Constantinople by the Muslim Ottoman Turks ends the Eastern Roman (Byzantine) Empire. It cuts off the land/sea routes that were used to bring silks, spices, and medicines from Asia. This leads to the decline of Genoa and Venice as seafaring powers.

1456: Alvise da Cadamosto, a Venetian working for Portugal, explores the west coast of Africa as far as the Senegal River. This marks the beginning of Portuguese exploration and trade expansion.

1460

1466: Bored with the weaving trade of his father and grandfather, Columbus runs away to sea.

1470

1474: Having studied navigation, Columbus joins a Genoan expedition to the eastern Mediterranean.

1476: Like many other Genoans and Venetians, Columbus moves to Lisbon, Portugal. Under the Portuguese flag, he sails into the stormy North Atlantic on trade missions to the British Isles and Scandinavia.

1477: In Galway, Ireland — while on a trading voyage to Iceland — Columbus sees two Oriental-looking corpses adrift in a boat. The Irish say the dead people are Chinese. This convinces Columbus that he can reach China by sailing westward across the Atlantic. (Modern scholars believe the dead people were either Eskimos or Lapps.)

1479: Ferdinand, husband of Queen Isabella of Castile, becomes King of Aragon on the death of his father, John II. Castile and Aragon unite to form the Kingdom of Spain under the joint rule of Ferdinand and Isabella. The new Christian kingdom quickly engages in trade competition with Portugal, and in a military campaign against Granada, the last Islamic section of Spain.

1480

1482: Columbus develops a plan to find a shortcut to Asia by sailing westward across the Atlantic. He fails to get backing from the king of Portugal for the venture.

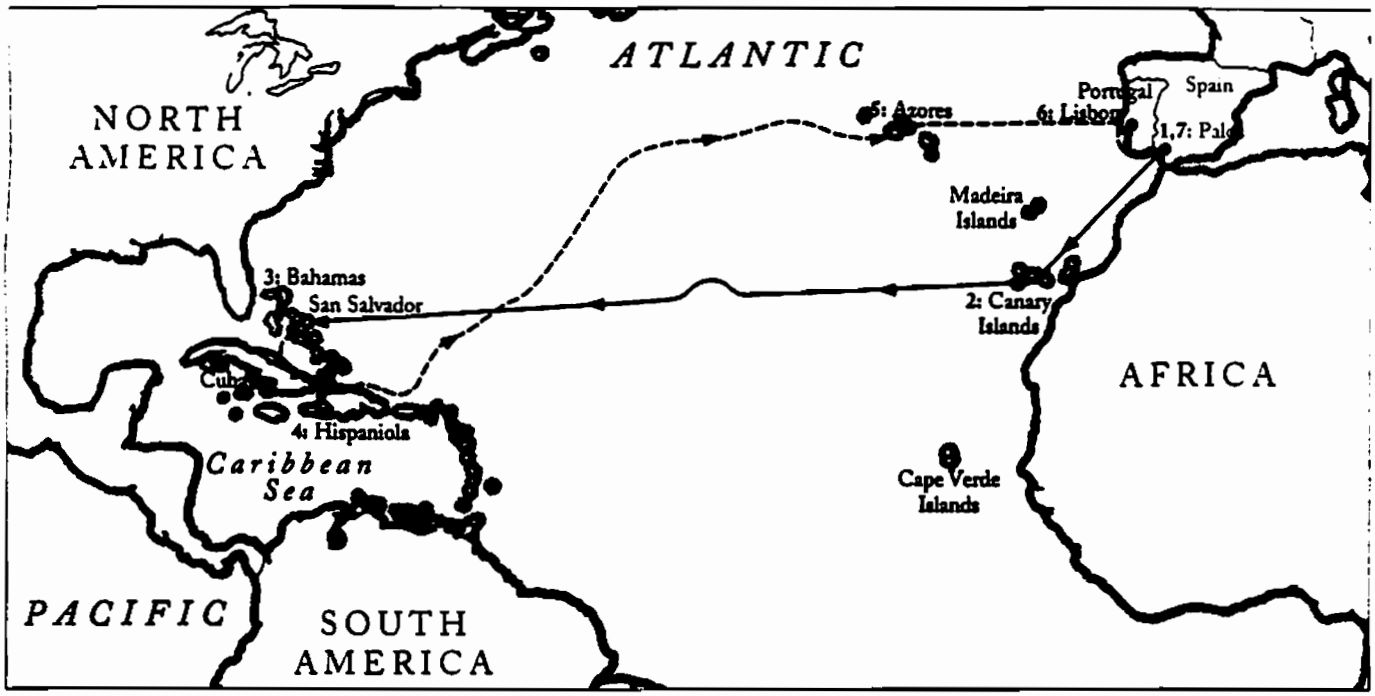
1485: Saddened by the death of his wife, and frustrated by a lack of Portuguese backing, Columbus moves to Spain.

1486: Queen Isabella of Spain listens favorably to Columbus's plan and sets up a commission to study it.

1487: Portuguese navigator Bartholomeu Dias sails all the way down the west coast of Africa and around the Cape of Good Hope, which he calls *Cabo Tormentoso* (Cape of Storms). This Portuguese achievement excites Spanish interest in finding other routes to the East.

1490

1492: The conquest of the Moorish Kingdom of Granada in January puts all of Spain under Christian rule. King Ferdinand and Queen Isabella expel the country's large Jewish and Muslim minorities. Christopher Columbus begins his first voyage across the Atlantic.



VOYAGE *to a* NEW WORLD

This map shows the route most historians believe Columbus took across the Atlantic in 1492. It is based on studies of Columbus's diaries, ocean currents, and trade winds.

1. PALOS, SPAIN: On August 3, 1492, the *Santa María*, *Pinta*, and *Niña* sailed southwestward toward the Spanish-owned Canary Islands, off the northwest coast of Africa.

2. CANARY ISLANDS: Columbus chose the Canaries as his point of departure because maps of the time showed it to be on the same latitude as Japan. Columbus thought that if he sailed westward toward the setting sun each day, he would reach Japan in about 30 days. Columbus had planned to spend a few days in the Canaries to take on fresh food and water. Instead, he stayed close to a month. *Pinta*'s rudder had to be repaired and *Niña*'s triangular lateen sails were replaced with square sails to take advantage of the trade winds across the Atlantic. The three vessels with 90 men and boys aboard left the Canaries on September 9, 1492.

3. THE BAHAMAS: On October 12, Columbus stepped ashore on one of the Bahamas islands. The people who lived there called it Guanahani. Columbus named it San Salvador.

4. HISPANIOLA: Columbus sailed from San Salvador to Cuba, which he named Juana. From there, he went on to the island of Hispaniola (now Haiti and the Dominican Republic). On Christmas Day, 1492, the *Santa María* ran aground and was wrecked on Hispaniola. Columbus built a fort with timbers from the ship and left 38 men as a garrison.

5. THE AZORES: Columbus sailed for Spain aboard the *Niña* on January 16, 1493. The *Pinta* sailed on the same day, but soon lagged behind. Winds and currents drove both ships northeast. They encountered several fierce storms, and the two ships became separated. The *Niña* reached the shelter of the Portuguese-owned Azores on February 17. The *Pinta* sailed on.

6. LISBON, PORTUGAL: On the way from the Azores, a storm forced the *Niña* to take shelter in Lisbon, on March 4, 1493. Columbus was entertained there by the king of Portugal, but after a few days, he began to feel like a prisoner. He finally managed to sail for Palos, Spain, on March 13.

7. PALOS: The *Niña* reached Palos on March 15, 1493, just hours ahead of the *Pinta*. Columbus was hailed as a hero for having found a new way to Asia. Until the day he died in 1506, Columbus believed he had sailed to Asia. Other voyagers soon pointed out that the people, plants, and animals they saw did not match those of Asia and that Columbus had in fact discovered a new continent.

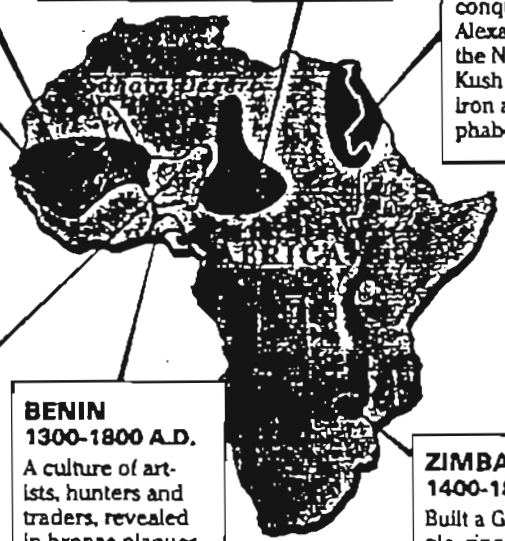
The Days of Empire

From the Nile to the Niger, from ancient times through European conquests, powerful cultures rose and fell on African soil leaving a legacy that amazes and perplexes moderns.

GHANA
700-1200 A.D.
An early commercial center. Mainly traded gold and salt. Efficient tax collectors.

KANEM-BORNU
800-1850 A.D.
Located on a major trade route and known for its sculpture and early conversion to Islam.

EGYPT
3000 B.C.-300 A.D.
Dynastic greatness until conquest by Alexander. Up the Nile, the Kush develop iron and an alphabet.

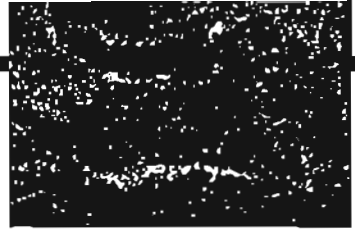


MALI
1200-1500 A.D.
The empire of warrior Sundiata ranged from the southern Sahara to trading capital Timbuktu.

SONGHAI
1350-1600 A.D.
Warriors and scholars, they sought to establish a single empire and control major caravan markets.

BENIN
1300-1800 A.D.
A culture of artists, hunters and traders, revealed in bronze plaques commissioned by the king or Oba.

ZIMBABWE
1400-1800 A.D.
Built a Great Temple, ringed by an 800-foot granite wall—still standing.



If humans first crossed the Bering Strait 12,000 years ago, then who built the 40,000-year-old sites that are scattered from the hills of Pennsylvania to the tip of Chile?

THE FIRST AMERICANS

Just 36 miles from where glaciers once sent their icy tongues, a jagged overhang juts out from the sandstone cliffs of southwestern Pennsylvania. In this ancient rock shelter, archeologists have found evidence of human occupation many millenniums ago. A snippet from a basket or mat woven from bark has been dated at 19,600 years; charcoal hearths, stone cutting tools and deer bones lined with knife marks have been dated at about 15,000 years. The shelter, dubbed Meadowcroft, also contained tools made of rock from quarries hundreds of miles away, suggesting that the resident hunter-gatherers traded with people in what are now Ohio and West Virginia, says Meadowcroft's excavator, James Adovasio of Mercyhurst College. On the face of it, the discovery that a sophisticated culture flourished in this area as long as 19,000 years ago isn't all that startling—except that the first Americans supposedly arrived from Siberia a mere 12,000 years ago.

Determining when and how people first entered the Americas "is one of the Holy Grails of archeology," says anthropologist Brian Fagan of the University of California, Santa Barbara. It's also one of the most controversial. The quest is hampered by the antipathy of established researchers to theories other than the 60-year-old notion that man entered the New World by walking across the Bering Strait on a 50-mile land bridge 12 millenniums ago and worked his way to Central and South America in just a few centuries. Despite evidence such as Meadowcroft, and sites from Canada to Brazil dated as old as 47,000 years, that theory has refused to die. It sprouts new variations to fit new finds and is so malleable that the old school manages to twist it to fit every challenge. Some researchers say they keep quiet about finds that may undermine the dogma, for fear of being denied grant money doled out by the old school.

Brazil's Pedra Furada (opposite); paintings inside the shelter may be the world's earliest (top of page)

The question of origins is almost as old as Europe's awareness of the Americas. In the 16th century, scholars believed that the New World's aborigines were related to societies described in the Old Testament—the Tatars of Asia, the Scythians of southeastern Europe, the ancient Hebrews. In 1589, Jesuit missionary José de Acosta theorized that small bands of "savage hunters driven from their homelands by starvation or some other hardship" had traveled overland through Asia, reaching the New World about 2,000 years before the Spanish conquest of Mexico.

De Acosta got it half right. Evidence of blood groups and fossil teeth support the notion that the first Americans came from northeast Asia in one of the final chapters of the human diaspora. Pursuing game herds across the land bridge or seeking the Pacific's bounty in primitive boats, at some point they stayed in the New World for good. But when?

On one side of the debate are scholars of what might be called the "couldn't have" school. They argue that until about 20,000 years ago, man lacked the technological savvy to construct durable shelters, fabricate clothes of hides and fur, build fires at will and hunt in groups—all skills needed for colonizing a new continent whose climate was much harsher than today's. Says Fagan, "To settle in the Americas, humans had to be able to survive on the open tundra year-round, with subzero temperatures for months on end. They had to be technologically and behaviorally pretty sophisticated." Then there's the little matter of geohistory. A couple of dozen millenniums ago, the planet became so cold that seawater was tied up in glaciers, exposing a land bridge across the Bering Strait—but also creating glaciers in the middle of the continent which would have impeded southerly migration from Alaska. The earth did not warm, easing the way south, until about 14,000 years ago. Traditionalists also note the paucity of well-documented sites earlier than

by **SHARON BEGLEY**

12,000 years ago in the Americas and before 18,000 years ago in Siberia: without someone in northeast Asia to make the trek, no trek would have been made. The conservatives believe that the sharp stone spearheads found at Clovis, N.M., which are dated at 11,500 years, are the earliest unambiguous evidence of humans in the Americas.

The quick answer to the couldn't-have school is: then who made the 40,000-year-old sites, scattered from Pennsylvania to Chile? "Over the last 50 years, as many as 500 sites in North and South America have been declared to be of extreme age," says Adovasio. Among those that challenge the Clovis model:

• Bluefish Caves in the Yukon, where Jacques Cinq-Mars of the Archaeological Survey of Canada has found evidence of episodic human activity between 25,000 and 10,000 years ago. One caribou bone, which excavators believe was cut and shaped to form a tool for butchering, has a radiocarbon date of 24,800 years; a mammoth leg bone, from which flakes were chipped, is dated at 23,500 years. "We're confident that people were at Bluefish Caves by about 25,000 years ago," says archeologist Richard Morlan of the Canadian Museum of Civilization.

• At Old Crow Basin, 40 miles northeast of Bluefish Caves, archeologists found broken mammoth bones dated at 25,000 to 40,000 years. The dates for the bones all fall within a relatively restricted time period and show signs of being broken in the same way; this implies they were fractured by people, not by other animals or by natural forces. But many researchers doubt that humans worked the bones.

• At Orogrande cave, in southern New Mexico, archeologist Richard MacNeish announced in May that he had uncovered stones that appear to have been chipped by human hands 38,000 years ago, a 26,000-year-old toe bone of a horse with a spear point embedded in it, and a clay fireplace—with human fingerprints—dated at 28,000 years. "I think this pushes Paleo-Indians' entry into the United States back to 40,000 years," says MacNeish. The site looks like a prehistoric hunting camp for people who summered in the Sacramento Mountains and returned to the warmer basins in the autumn. Several archeologists have questioned MacNeish's interpretation.

• Taima-taima in northwest Venezuela contains the remains of a mastodon slain more than 13,000 years ago. Also unearthed: spear points and stone tools different from anything of a similar age from North America. "This suggests that people were in South America earlier than previously believed and that regional traditions had already developed by 13,000 years ago," says archeologist Ruth Gruhn of the University of Alberta at Edmonton.

• Pedra Furada in northeast Brazil is probably the most controversial site. Its discoverers, led by Niède Guidon of the Institute of Advanced Social Science Studies in Paris, claimed in 1986 that the huge rock shelter carved into the bases of immense sandstone cliffs was occupied for millenniums. The evidence: 17,000-year-old red ocher cave paintings that show birds, deer, armadillos and stick-figure people in scenes of hunting, childbirth and sex; and stone artifacts and hearths dated at 32,000 years. Last year Guidon announced even more provocative finds: an ash-filled hearth ringed with stones and dated at 47,000 years, as well as 20 other artifacts dating earlier than 14,300 years. Some scholars question whether the "human" artifacts at Pedra Furada are in fact natural, and are wary of some of the radiocarbon dates. But if the oldest date is correct, wrote Brian Fagan last year in Archaeology magazine, "then human beings were living in the New World at a time when Neanderthals flourished in Europe."

• Monte Verde, west of the Andes in south-central Chile, lies under a peat bog whose lack of oxygen inhibited decay. A team led by Tom Dillehay of the University of Kentucky has discovered an unparalleled collection of plant remains and wooden artifacts there. Among them: wooden digging sticks, mortars, spear[illegible] and building

Did humans roam Old Crow Basin in the Yukon as long as 40,000 years ago?

foundations, dated at 13,000 years, and remains of 65 plant species, including 15 with medicinal properties that Indians use today to treat skin diseases, colds and stomach ailments. Many of the plants come from the highlands or the coast. Either the settlers regularly trekked 60 miles to gather them or they traded with neighbors. Dillehay recently found three stone hearths and 26 pebbles that appear to have been chipped by humans as long as 33,000 years ago. But he remains cautious: "I'm the first to say that [these older dates] are inconclusive."

Whatever the date of the first migration into the Americas, there was likely more than one. Anthropologist Christy Turner of Arizona State University finds that teeth from New World natives fall into three categories. Those from the Inuit and the natives of the Aleutian Islands differ from those of North and South American Indians, which in turn differ from natives of the northwest coast and the interior of Alaska. That suggests three distinct treks, with the new arrivals following separate evolutionary paths.

Many headed south. Several scholars have assumed that the migrants, nudged by population pressure, simply expanded their territories a little bit every generation. But some archeologists are borrowing a page from Thor Heyerdahl. They surmise that people living in coastal Siberia would have been seafarers who could have not only crossed the Bering Strait but sailed on down to South America. "Even primitive boats could have traversed the entire Pacific coast of North and South America in less than 10 years," Knut Fladmark of British Columbia's Simon Fraser University suggested in Natural History magazine in 1986. Ruth Gruhn has a similar notion—"that the earliest people came along the coast," probably in kayaks and umiaks, but took as long as 20,000 years to reach Patagonia. (Humans crossed 60 miles of ocean to reach Australia from southeast Asia 40,000 years ago.) Any of their coastal settlements, however, would now be under water or eroded away by time and tide.

At Monte Verde, 65 plant species were preserved under a peat bog for 13,000 years

This maritime hypothesis may or may not resolve the debate between adherents of the traditional theory and their challengers. But if the first Americans arrived by sea, then it would not matter when the Bering Strait was bridged by land or the continental interior blocked by glaciers. And if they traveled down coastal waterways, where the climate was milder, then they might have been able to expand *Homo sapiens's* range much earlier than their technology would otherwise have permitted. If so, theirs was a truly ancient odyssey and one that calls into question the very notion of a New World.

With SUSAN MILLER

ORIGINS OF INDIAN PEOPLES

From the testimony of expert witness, William S. Laughlin, Chairman, Laboratory of Biological Anthropology, Department of Biobehavioral Sciences; Professor of Biobehavioral Sciences at the University of Connecticut. Dr. Laughlin received his Ph.D. at Harvard University.

I am concerned with human evolution and with population variation and with population history. My primary focus has been on the origin of man in the Americas and the movement of people from Siberia to the Americas. I have been working on such studies since 1938.

All the emigrants into these continents came from Asia and more precisely from Siberia. They came across the Bering Land Bridge which formerly connected Siberia and Alaska, then moved down all the way into South America. There were no people here before the Indians arrived.

The most conservative estimate of when the migrations began is 15,000 years ago. There were probably at least three separate migrations, all of them small. I would estimate that the migrations occurred over a period of two to four thousand years. Then the Bering Land Bridge was submerged. That cutoff date, some 11,000-10,000 years ago, is clear.

The people who migrated had to adapt to every ecological zone—high altitudes, dry deserts, jungles, river conditions, arctic cold. In this way they performed one of the most interesting and significant experiments in human evolution, genetic and cultural. People from one continent successfully going to another continent and occupying every ecological zone is significant.

In every case they had to solve the problems of what foods were edible and how to get the animals in a systematic fashion. Hunting, it should be noted, requires childhood training in observation and animal behavior. Hunting as a way of life is a complex integrated biobehavioral system, and not simply a subsistence technique. Therefore, they had to have adequate social organization to solve the economic and territorial problems. Agriculture was developed first in Middle America and spread. All the major items of civilization—monumental architecture, the concept of zero, mathematics, astronomy, writing—were present without external intervention—the entire inventory of what constitutes civilization.

Corn, potatoes, varieties of beans, these and many other plants were Indian inventions. No place else in the world has the plant, maize, been developed. However it was done, the Indians went from whatever the predecessor of corn is to a plant that now exists. Its development was around 4,000 years ago or more.

Major architectural achievements began over 2,000 years ago and reached an apex around 400 A.D. Large civilizations with complex systems of trade over large areas existed. Pyramids which are of similar complexity to those in the Middle East, to which they are not related, were built. There are astronomical observatories with

sight-lines for observing planets and the timing of planetary movements. There were many interesting forms of architecture; several kinds of house styles were developed.

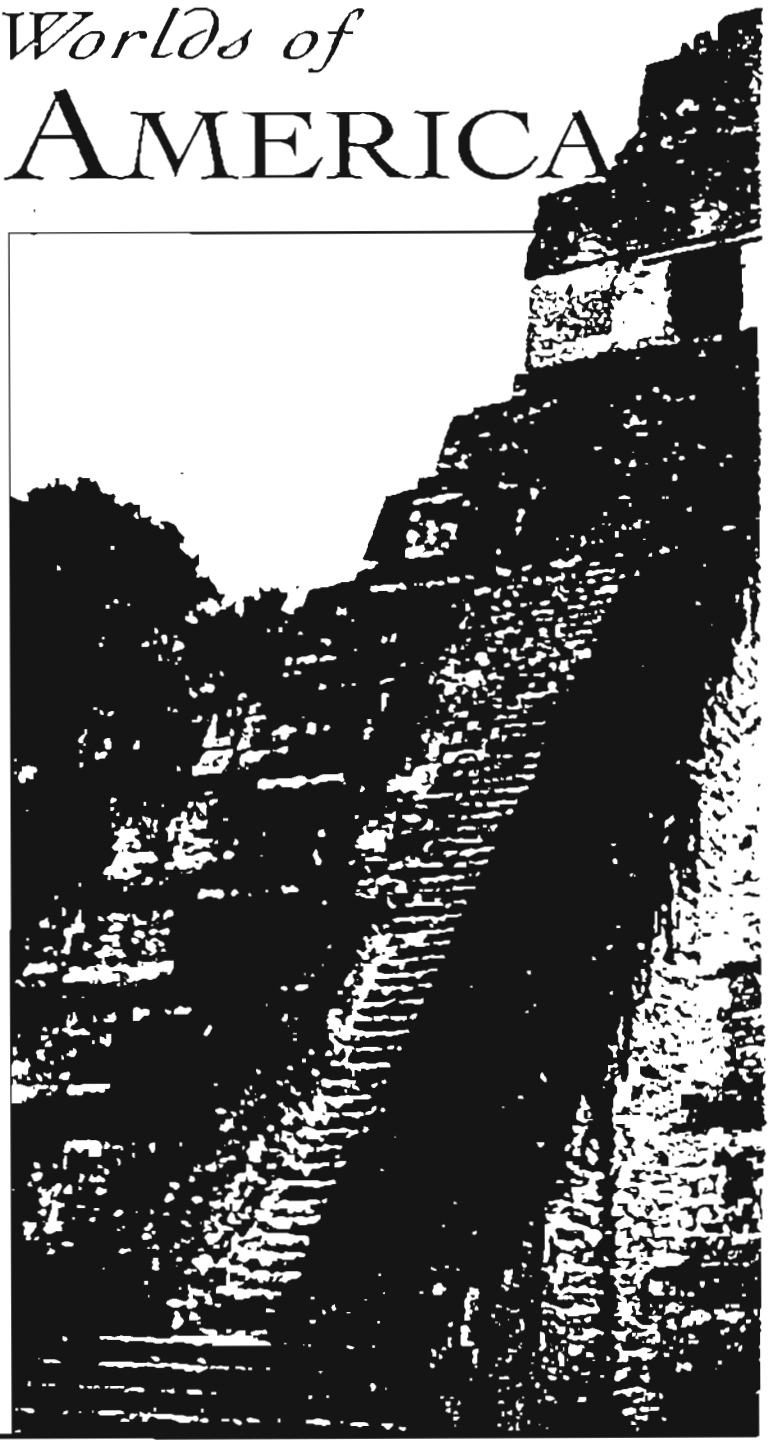
In the Southwest, the people used adobe and stone. In the Southeast, some houses were built on elevations with ingenious interlocking devices for holding them together. The Eskimos invented the snowhouse, the winter house called an igloo. On the West coast, some amazingly large houses, often over a hundred feet in length and of quite massive and ingenious construction were built. The Plains people devised teepees which are very artful and workable housing, practical for their use. In the Northeast, the long houses were developed. These housed hundreds of people in some cases. Suitable housing was always developed.

Europeans found it difficult to believe that the Native people, the people they encountered were equal to them. They thought that the trigger or the impetus or stimulus for Native development came from somewhere else. The most logical place was the Middle East, where European influence had originated. So they reasoned that Indians were of the tribes of Israel. I think there is a tendency to explain away the autonomous achievements of American Indians by assuming that somebody else was responsible for them.

The Sioux shared the knowledge of other Native nations here. They had a basic knowledge of astronomy, where planets were, and used this knowledge for travel.

The living Sioux Indians are demonstrably and clearly related to earlier Indians who were here in the United States many thousands of years before any Europeans arrived anywhere in the Americas. The incontrovertible evidence is seen in a great many physical traits of the teeth and the skeletons. The genetic continuity between the living Indians and their antecedent populations is firm and it is demonstrable with the highest level of scientific proof.

The Lost Worlds of ANCIENT AMERICA

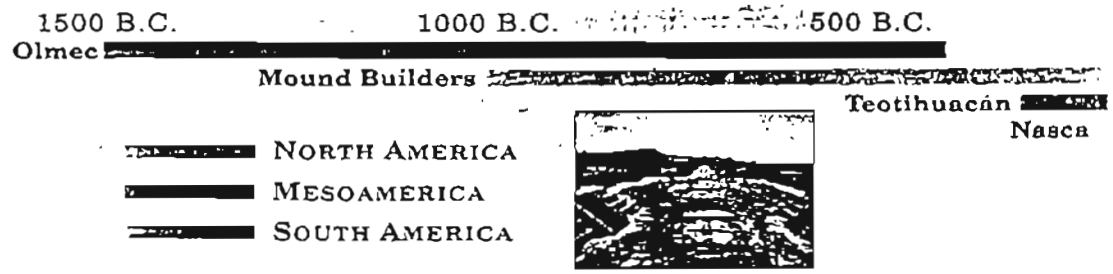


The New World was hardly new. Civilizations had thrived here long before Columbus arrived.

by **MELINDA BECK**

In his explorations of the New World, Columbus found only primitive inhabitants—"a very poor people . . . without weapons or laws." He didn't go far enough. In Mexico there were towering temples and a teeming city as big as any in Europe. In Peru stretched the vast Incan empire, resplendent in silver and gold. In the Guatemalan jungles—and in the great plains of America—lay the ruins of other civilizations that had thrived centuries before.

These ancient cultures lacked many inventions crucial in the Old World. There were no iron and steel tools, no beasts of burden, no keystone arches or domes. Still, indigenous Americans constructed huge buildings, devised accurate calendars and speculated about the solar system. They also practiced some of the bloodiest religions the world has known. Many societies had vanished for mysterious reasons long before the Europeans landed. Those that still flourished soon fell prey to the conquerors. Here is a brief look at some of the lost worlds of ancient America.



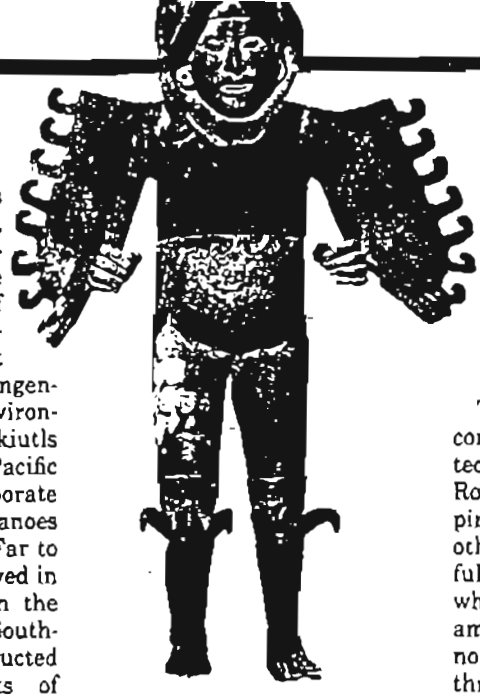
The Moche told their story through realistic pottery (left)

In the jungles of Guatemala, the Maya erected great temples, like this one at Tikal

NORTH AMERICA

By the time Europeans reached North America, it was inhabited by perhaps 2 million people grouped into hundreds of small tribes. They represented vastly different cultures and traditions, ingeniously adapted to their environments. The Haidas, Kwakiutls and Tlingits of the Pacific Northwest built elaborate dwellings and giant canoes from felled evergreens. Far to the north, the Inuit thrived in their universe of ice. In the cliffs and mesas of the Southwest, the Anasazi constructed multistoried apartments of sandstone and mortar, beginning about A.D. 700. There were at least 800 rooms and ceremonial kivas in Pueblo Bonito, part of Chaco Canyon in New Mexico. By A.D. 1300, the cliff dwellers had been driven out, probably by drought. But their descendants still live nearby: the are the Pueblo.

Mound Builders. Something in man's nature compels him to erect monuments to the unknown, even when food is scarce and survival uncertain. So it was with the ancients who built Poverty Point 3,000 years ago in Louisiana. The concentric earthen ridges spanning a square mile form a New World Stonehenge: stand at a particular spot during the spring and fall equinoxes and one can see the sun rise directly over the central plaza. Before the Europeans arrived, other native Americans built immense mounds of earth as temples and burial places. Thousands of such earthworks dot the landscape from Florida to Wisconsin; some were as high as 10 stories; others were hundreds of feet long and shaped like birds, serpents and humans. Until the 1890s archeologists refused to believe the "savage hordes" were capable of such undertakings. Some scholars thought they were built by stray Vikings, even a lost tribe of Israel. But they were indeed the work of people who settled beside them to form North America's earliest communities. By the 13th century, Cahokia, across the river from St. Louis, supported a population of 10,000. The six-square-mile city boasted 100 mounds; the largest was broader at its base than the Great Pyramid of Egypt.

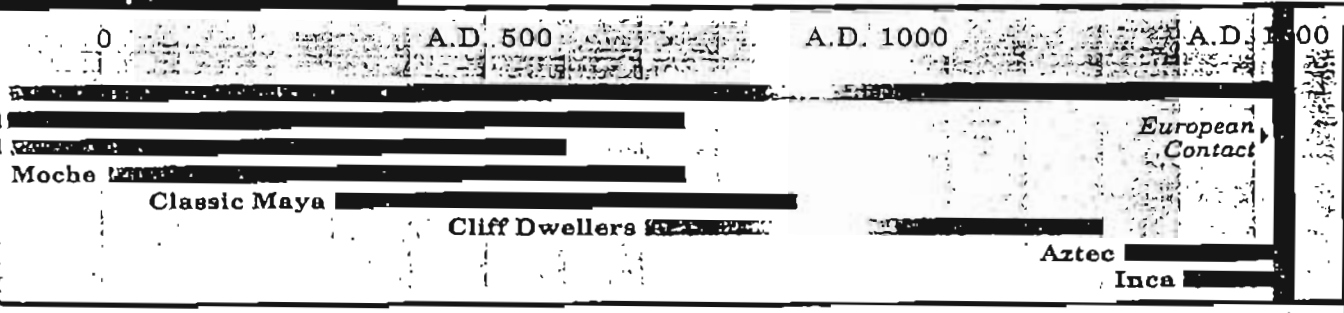


The eagle was the emblem of the Aztec war god

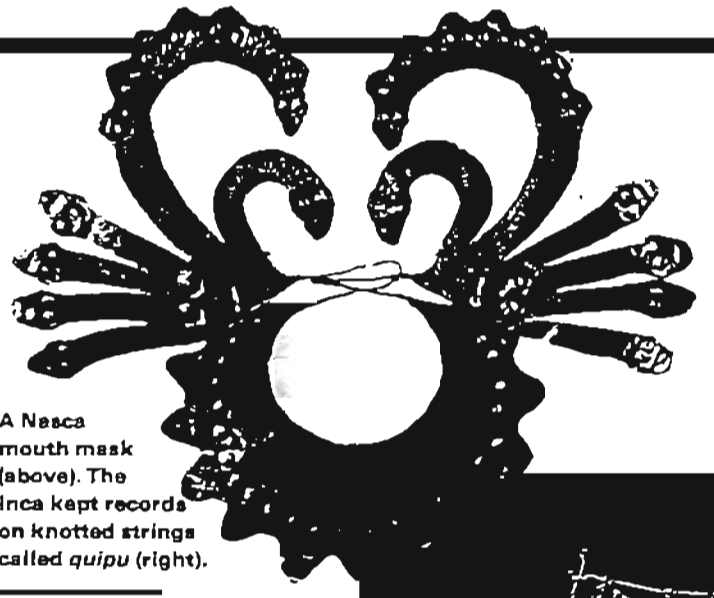
MESOAMERICA

To place them in a Western context, the Maya and the Aztecs were the Greeks and the Romans of the New World, empire builders surrounded by other remarkable, if less powerful, cultures. They inhabited what archeologists call Mesoamerica, which stretches from north of Mexico City down through Nicaragua. At its zenith, it was home to 25 million people who, despite local differences, shared a common cultural tradition that first flourished with the Olmec.

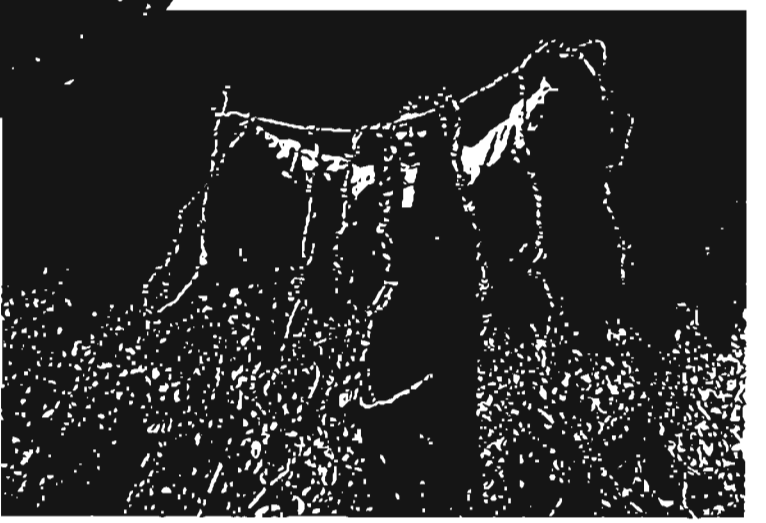
Olmec baby (left) and mosaic mask from Teotihuacán



Figurines were often buried with the Mayan elite



A Nasca mouth mask (above). The Inca kept records on knotted strings called *quipu* (right).



Olmec. Sometimes called the mother culture of Mesoamerica, the Olmec arose along Mexico's Gulf Coast about 1500 B.C. (150 years before Tutankhamen in Egypt) and spread throughout the region. They devised a crude writing system and erected elaborate ceremonial centers. But it is the basalt heads for which they are still famous—colossal, multi-ton carvings of their rulers' faces, terrifying and enigmatic. The Olmec were also fond of a ball game similar to soccer, played on a specially made court by teams in protective gear. In postgame ceremonies, the losers were sometimes decapitated.

Teotihuacán. The first city-states emerged in central Mexico about 500 B.C. The grandest was Teotihuacán, covering eight square miles, larger than imperial Rome. It was organized into neighborhoods and contained the workshops of more than 500 potters, weavers and sculptors. Home to more than 200,000 people in A.D. 600, Teotihuacán was burned, looted and abandoned 150 years later.

Maya. Dozens of great temple-crowned pyramids rising above the jungle, from Tikal in Guatemala to Chichén Itzá in the Yucatán, stand as chilling evidence of this formidable culture, which dominated Mesoamerica during the first millennium A.D. The Classic Period collapsed about A.D. 900, probably from overcrowding and internecine warfare. Master astronomers, the Maya devised precise calendars, and their numerical system used the concept of zero—1,000 years before the Europeans adopted it from the Orient. They also developed the only true writing system in ancient America, a complex system of hieroglyphs which they used to record their history in bark-paper books and on tombs and buildings. Recent breakthroughs in deciphering the glyphs have revealed some startling Mayan traits: they were intensely warlike, and their rulers practiced self-mutilation—kings pierced their penises with stingray spines and queens ran barbed ropes through their tongues.

Aztec. Initially a small band of mercenaries, the Aztecs emerged as the most powerful people in Mesoamerica in the 14th century, exacting tribute from hundreds of surrounding towns. To appease their gods, Aztec priests tore hearts still beating from the chests of living victims. According to legend, more than 5,000 people were sacrificed to celebrate the coronation of Montezuma II in 1502. The Aztec capital city, Tenochtitlán (on the site of modern Mexico City), was several times larger than London when Hernán Cortés arrived in 1519. The Spaniards were dazzled by its glimmering spires, raised gardens and canals rivaling those of Venice. The Aztec leader at first welcomed Cortés, believing he was the god Quetzalcoatl, prophesied to return in that year. But Cortés soon imprisoned Montezuma. Aided by enemy tribes and a smallpox epidemic, the Spaniards destroyed the Aztec empire in two years.

The Inca were renowned for their gold artifacts

South America

As city-states took shape in Mesoamerica, a similar development occurred in the Andean region of Peru, notably with the Moche on the north coast and the Nasca to the south.

Nasca. The vast geometric lines running for miles across the Peruvian desert have long been a subject of speculation. One pulp writer even suggested they were runways for UFOs. But scholars trace them to the Nasca, who lived there from 200 B.C. to A.D. 600. Some lines relate to the summer and winter solstices and may have marked dates for planting. Others, in the images of animals and humans, may have been shaped for the eyes of sky-dwelling gods. Similar figures appear in the still highly prized Nasca ceramics and metalwork.

Moche. Arising at the dawn of the Christian era, the Moche never developed a writing system, but they left rich records of their lives on astoundingly realistic pottery, depicting battle scenes, afflictions like leprosy and pre-Columbian sex (which appears to have been strikingly similar to post-Columbian sex). Mochican artisans never had time to record whatever calamity befell them; their artifacts disappear from the archeological record about A.D. 750.

Inca. Headquartered high in the Andes, the Incan empire was larger than Ming China or the Ottoman Empire, extending from Ecuador to Chile, in the 15th century. The city of Machu Picchu, 7,000 feet above sea level, contained more than 100 acres of temples, plazas, barracks and homes; suspension bridges of braided-fiber cable spanned great gorges along the empire's superb highway system. The Inca had abundant silver and gold, which lured Francisco Pizarro in 1532. Weakened by smallpox and civil war, the Inca were easy prey for the conquistadors, who hauled off storehouses of treasure. Legend has it that the Inca buried still more gold to hide from the Spanish. But none has ever been found. ◆

Out of Egypt, Greece

Seeking the roots of Western civilization on the banks of the Nile

BILL WARREN

Bernal: In 'Black Athena,' trying to 'lessen European cultural arrogance'

Was Cleopatra black? Was Socrates? Did Nile legionnaires conquer the Aegean, setting the cradle of Western civilization in motion? For more than a generation African and African-American scholars have offered evidence that civilization was born on what Europeans called the Dark Continent. Led by the late Senegalese historian Cheikh Anta Diop, they have argued that Pythagorean theory, the concept of pi, geometric formulas and the screw and lever are only some of the patrimonies of Egypt, and not Greece as conventional wisdom holds. Western scholars gave these ideas about as much credence as they did spurious Soviet claims to have invented the telephone.

They didn't dispute the achievements of the great black kingdoms of west Africa in governance, social organization and economic sophistication. But they dismissed them as a sideshow in human civilization. And even if Egypt was pretty great . . . well, Egypt was not really Africa, cartographers notwithstanding. "Just as Africans were taken out of Africa, so Egypt has been taken out of Africa," says Barbara Wheeler, director of Africana Studies at Kean College in Union, N.J. But now the claims for Egypt, and Africa, have arrived front and center on the academic stage. Classics departments from Oxford to Harvard are embroiled in a red-hot debate over what role Egypt played in shaping the glory that was Greece. And that leads to an incendiary question: was Egypt "black"?

Perhaps it is mere coincidence that the scholar who has forced these questions onto the agenda has lighter skin and straighter hair than the west Africans who tried in vain to get the academy's attention. Martin Bernal is a professor of government at Cornell University, a scholar of modern China, Vietnam and Japan, a Briton whose father was the wartime adviser to Lord Mountbatten. In the 1970s a midlife crisis sent him in search of his distant Jewish roots. His study of Hebrew and antiquity led him to Greece, and thence to Egypt. The result was the first of a projected four-volume series titled "Black Athena."

GINER—STOCK MARKET

Q. Did Nubians from east Africa sail on Phoenician fleets to the Western Hemisphere before 1492?

A. Sculpture dated 800 B.C., found in Mexico, has African features. It's good but not conclusive evidence.

Published in 1987 and winner of the 1990 American Book Award, the 575-page work explores why European scholars beginning in the 18th century excised Egypt and Canaan from the family tree of Western civilization. Bernal's answer: the classicists were racists and anti-Semites. They could not stand the idea that their beloved Greece had been made "impure" by African and Semitic influence and so dismissed as mere myth the Greeks' own accounts of how Egyptian and Canaanite technology, philosophy and political theory shaped Aegean civilization.

In place of this ancient model, which had stood for 3,000 years, the classicists offered what Bernal terms the "Aryan model." This theory holds that Greek civilization began when (white) Indo-European speakers from the north swept down on the native (white) "pre-Hellenes" between the fourth and third millennium B.C. Most modern researchers say "there's no real question" that 19th-century academics were racist and anti-Semitic, as classicist Gregory Crane of Harvard University puts it. But not all agree that such personal beliefs tainted their scholarship.

The just published Volume II of "Black Athena" moves beyond its predecessor's ad hominem attacks to offer a bold alternative to the Aryan model. Marshaling mountains of evidence from linguistics, archeology and ancient documents, Bernal argues that between 2100 and 1100 B.C., when Greek culture was born, the people of the Aegean borrowed, adapted or had thrust upon them deities and language, technologies and architectures, notions of justice and polis. From where did they come? Egypt and the Phoenicians of Canaan, says Bernal. A sampling from his numbing barrage of evidence:

■ **Ancient documents.** The Greeks wrote that their culture emerged (around 1500

B.C.) when Egyptians and Phoenicians civilized the Aegean natives. Herodotus wrote that "the names of nearly all the gods came to Greece from Egypt." Greek legends relate that Egyptian and Phoenician conquerors ruled all or parts of Greece until the 14th or 15th century B.C.; historians wrote that such great lawgivers as Lykourgos studied in Egypt and brought back the legal and political basis for the West's polities.

Bernal's critics treat the ancient texts more suspiciously. Greeks may well have traced their civilization to Egypt (Sparta used Egyptian pyramids as one of its symbols), they say, but only to claim legitimacy through an older civilization, and not because it reflected historical truth.

■ **Archeology.** Scores of Egyptian objects, from coins and jewels to sculpture and earthenware, litter the Aegean from Crete to the Greek mainland. Palaces suddenly appeared on Crete in around 2000 B.C.—the first time this architectural style graced any land other than Egypt—at exactly the time when Crete abruptly switched from being a rural, farming state to an urban one like Egypt. Bernal says this sudden change could have occurred only through Egyptian colonization. Around 2750 B.C., the Greek city of Thebes built a pyramidlike structure resembling those on the Nile. Murals from buildings on Thera preserved in volcanic ash in 1628 B.C., show Egyptian influence. They depict a stratified society, scenes of the Nile River and African plants drawn according to Egyptian artistic convention.

The critics respond that such influences more likely reflect trade and cultural ties, not Egyptian conquest. No ancient generals left behind papyrus with their battle plans.

■ **Linguistics.** Bernal is fluent in Greek, Hebrew, Coptic, Chinese, French, German, Japanese and Vietnamese; his grandfather wrote the definitive Egyptian grammar. He combines his own etymological analysis with secondary sources to argue that half of all Greek words are derived from Egyptian or Semitic. He traces scores of words to the Egyptian, including sword, wisdom, honor and king; the large number of Egyptian-derived words, says Bernal, argues for "massive and sustained Egyptian cultural influence" over a less developed population.

Because hardly any scholars share Bernal's virtuosity of language, very few can judge his thesis, which turns on such arcana as whether the Greek "Athena" is truly derived from the Egyptian "Nt." Those who can judge parts of it generally agree that Bernal's etymologies are plausible but insist that this could be the result of trade and cultural contact. "Most scholars say there is no real evidence of conquest or colonization," says historian James Mulhy of the University of Pennsylvania.

Who were these people, then, who left their mark on the childhood of Western civilization? For years many African scholars have argued that the answer is as plain as the Sphinx's face: Egypt was a black civilization. By inference, say some Afrocentrists, Euclid, Homer, Socrates and Egyptian royals from Tut to Cleopatra were African blacks.

Egypt almost certainly originated in the black African societies of the upper Nile, in what is now Ethiopia. Fossil skulls from the start of Egypt's Dynastic period (30th century B.C.) resemble people in northern Ethiopia today. Bernal is convinced that many pharaohs looked black. Among them: Menthotpe, who around 2100 B.C. reunited Egypt after 300 years of chaos, and Sesostris who 100 years later sent African regiments into the Levant, Turkey and perhaps southern Russia. There, Herodotus wrote, they settled on the eastern shore of the Black Sea.

But that does not mean that Egyptian civilization as a whole was black, as the term is understood today. Bernal says, and almost all scholars agree, that for 7,000 years Egypt has been populated by African, Asian and Mediterranean peoples. He notes that ancient carvings usually show Nefertiti with Caucasian features, and believes Cleopatra was Greek (her family traced its ancestry to Alexander's invading generals). Says Bernal, "It was a thoroughly mixed population that got darker and more Negroid the farther up the Nile you went... though even Egyptians could have bought a cup of coffee in America's Deep South in 1954." He allows that a more accurate title of his work would have been *"African* Athena."

Other scholars attack the notion that Egypt was black. Classicist Frank Snowden, now at Georgetown University, spent his career (he is 80) researching ancient notions of race. Arguably America's greatest black classicist, he believes that when Herodotus, Aeschylus and Aristotle wrote of "black" Egyptians, they were referring only to their swarthier complexion. "Race as an intellectual construct didn't exist" for the ancients, agrees historian Gary Reger of Trinity College in Hartford, Conn. (In this they were smarter scientists than most people today: the concept of race has no biological validity, and genetic analysis shows that some "blacks" share more of their genes with "whites" than either do with members of their own "race.")

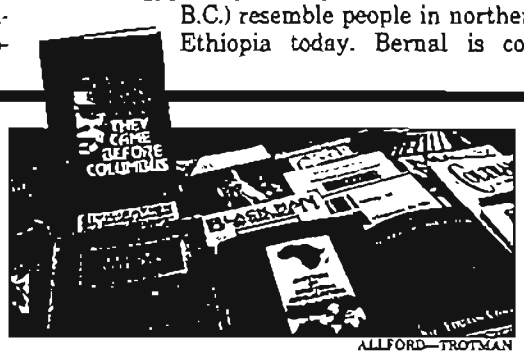
It was not too many years ago that anthropologists desperately sought to trace humankind's origins to anyplace but Africa. That debate has been settled in favor of an east African genesis, a resolution that struck at the heart of European biological arrogance. Bernal readily acknowledges that "the political purpose of 'Black Athena' is, of course, to lessen European cultural arrogance." He may not have done that yet, but he has clearly forced scholars to reexamine the roots of Western civilization.

SHARON BEGLEY *with* FARAI CHIDEYA *and* LARRY WILSON *in New York and bureau reports*

ART RESOURCE

Q. How advanced were west African empires?

A. They had cities, compasses and navigation charts, founded a university in Timbuktu, traded gold and slaves with north Africans and built great palaces.



ALLFORD—TROTMAN

Going to the Sources

The movement has its basic texts —Asante, Bernal and Diop—and its foes—Schlesinger and Ravitch.

AFROCENTRICITY, by Molefe Kete Asante, Africa World Press, 1988

BLACK ATHENA, Volumes 1 and 2 by Martin Bernal, Rutgers U. Press 1987-91

CIVILIZATION OR BARBARISM, by Cheikh Anta Diop, Lawrence Hill Books, 1991

THE AMERICAN READER, edited by Diane Ravitch, Harper Collins, 1990

THE DISUNITING OF AMERICA by Arthur Schlesinger Jr., Whittle Direct Books, 1991

Dangerous Memories

Invasion and Resistance Since 1492

Remember us after we are gone. Don't forget us. Conjure up our faces and our words. Our image will be as a tear in the hearts of those who want to remember us.

Popol Vuh - Sacred Mayan Book

A Publication of the Chicago Religious Task Force on Central America

Advance Comments on Dangerous Memories

I think this is the best resource guide that has become available for how to teach the quincentennial, for parents and teachers and people of conscience. It is only by learning our true histories that we will be able to situate ourselves in the world today and only when we have learned where we have been as a people that we can begin moving forward In less destructive ways.

Jan Elliott, Native American activist, editor of *Indigenous Thought*

...a brave piece of work which presents events, with honesty, from the perspective of the ones who were invaded and slandered and repressed for centuries...Our history, the history of the Native American continent, is a history of constant struggle, dignity, and love for life. It is time for us to stand up and denounce the lies about us and take in our hands the writing and telling of our own and real history..

Carmen Aguilar, storyteller and teacher, Academcy for Performing Arts, Chicago

A fascinating book: ...It pulls together a history we don't know. As we begin to look at the events in history , the recognition of the part of the people in the formation of this society is usually absent. Dangerous Memories *provides some ways to look at the people on whose backs this country was formed. The exercises are helpful because they translate into the possibility of controlling our own behavior.*

Faith Smith, member of the Ojibway/ Chippewa Nation, president, Native American Educational Service

Dangerous Memories:

Invasion and Resistance Since 1492

- 272 page 8 1/2 x 11 perfect bound book
- Illustrations and bibliography

Section I: Invasion
- Europe before the conquest
- The Western Hemisphere before the Conquest
- The Conquest and Its Consequences

Section II: Resistance
- African-American
- Indigenous America - North, Central, Latin America
- Present Day Struggles

Section III: Critical Essays
- Other Voices, The Other Invasion
- Crossing the Borders

Section IV: Teaching Strategies

This is a dangerous book: it imperils long-accepted fictions and half-truths about the "discovery " of the "new world." It digs deep into our common past, Europeans' and colored peoples', haves' and have-nots', during the past five centuries. It is bottom-up history challenging the trickle-down versions we have so long been spoon-fed. The work of Eduardo Galeano comes to mind; Dangerous Memories *has the same revelatory excitement. A healthful antidote to the pabulum we're about to be fed during the Columbus Quincentennial—it is thrilling history.*

Studs Terkel, author, social commentator, political activist, radio interviewer

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Five Hundred Years of Invasion in the Americas

Throughout the Americas the last five hundred years have meant invasion and destruction for indigenous peoples

North Americans are taught that the five hundred years since Columbus's "discovery" have been a golden age, leading up to the formation and expansion of the United States. However, many of the facts of the last five hundred years have been omitted or severely distorted in our histories. The voices and protests of the peoples whose ancestors were killed and enslaved, whose lands were stolen, and who still live in fear for their lives are rarely if ever heard in our history.

In 1992 the invasion of Columbus and the series of invasions that he launched will be very much in the public eye. The Quincentenary is one of those "teachable moments" that call for new resources that will help the people of this continent reclaim a stolen and silenced history. *Dangerous Memories* seeks to be one of those resources.

How history is told is as important as whose history gets told. The authors of this volume have done us all an immense service by retelling the story of five hundred years of the evisceration of Caribbean and other people of color. And they have done so in a way that makes a people's history come alive in its terrifying anguish, pain, and brutality.

Bernard D. Headley, professor of Criminal Justice, Northeastern Illinois University

What is Dangerous Memories?

Dangerous Memories examines the last five hundred years by reviewing the invasion and examining the resistance and culture of the indigenous peoples in the Americas

Rarely has the history of the Americas been examined through the eyes of indigenous peoples. *Dangerous Memories* is a resource book which provides this perspective through the use of speeches and writings of indigenous peoples from both primary and secondary sources. These, along with the writings of other historians, form the basis of *Dangerous Memories*.

Included at the end of the book are classroom exercises in the form of simulation games, group projects, writing assignments, role plays that make history come alive in the present.

Dangerous Memories lets indigenous and African voices offer both challenge and hope in the attempt to discover a real "new world."

The Chicago Religious Task Force on Central America (CRTFCA) has been involved in Central American issues for over ten years. Originally a local solidarity group, the Task Force has expanded to become involved nationally and internationally in Central American peace efforts. One of the primary projects of the CRTFCA is the journal *¡Basta!*

Authors of *Dangerous Memories*

Renny Golden (Chapter Three), activist and poet, teaches at Northeastern Illinois University. Her newest book, *The Hour of the Poor, The Hour of Women*, recently won the Crossroads/Continuum Women's Studies Award for 1991. *The Hour of the Furnaces* will be published in 1992.

Michael McConnell (Chapter Two), formerly the coordinator of an alternative high school in Chicago and co-author (with Renny Golden) of *Sanctuary: The New Underground Railroad*, was a contributor to *The Moral Nation*, published by Notre Dame University Press, and *Freedom at Risk*, published by Temple University Press.

Cinny Poppen (Chapter One) taught English and writing in public and alternative schools at all age levels for twenty years. Now she is a peace activist, working for the Chicago Religious Task Force on Central America as one of the editors of *¡Basta!*

Authors of "Teaching Strategies"

Peggy Mueller, who has been a teacher, school consultant, and counselor, is currently the director of the Urban Education Program of the Associated Colleges of the Midwest, a teacher training program. She and **Marilyn Turkovich** have co-authored twelve curriculum books on area studies, multi-cultural/global education. Turkovich is director of Educational Studies at Columbia College, Chicago. She was the principal writer of three series for Independent Broadcasting Associates, one of which, "Living on the Edge," received the 1990 presidential award for ending world hunger.

How To Use *Dangerous Memories*

This book is written in a way different from the usual history text. It is a source book for reading primary documents, comments on history, and historical summaries related to the colonization and conquering of the Americas. The authors have attempted to provide some of the vision and voices of this history which are not usually seen or heard in mainstream educational curricula.

Chapters One and Two

The first two chapters of *Dangerous Memories* present overviews of the European invasion and the subsequent five hundred years of resistance. Each of these two chapters contains two "readings" of this history. One reading (the smaller inside column in bold print) presents an historical context for each subtopic. The other reading (in the wider middle column) presents some of the "missing pages" of history, the voices and commentaries not usually included in texts from which we have learned the history of the Americas. They support, dramatize, explicate, and extend the historical context, leading the reader to possibilities for further research.

Material in italics is directly quoted from the source listed at the end of each passage. The author's name, the title (occasionally in a shortened form), and the page number are given for easy reference. Citations within the historical context follow the standard form: author's last name and page number. Full bibliographic information appears at the end of each chapter.

In several places in the first chapter, we have emphasized particularly important writings by displaying them as one- or two-page spreads, with the hope that they might be useful as easy-to-copy resource material. The pattern of type faces is reversed for easy reading: direct quotations are in plain type; explanations precede the quoted excerpts and are in italics.

The outermost column at the edge of each page contains additional voices on the history, short quotes, poems, and songs which connect dramatically to the other readings.

Chapter Three

The last chapter addresses, in the form of two essays, the war against culture and resistance to that sustained attack. The chapter raises strategic questions about where we go from here. Each of these essays is also accompanied by selected readings, placed in the outermost column at the edges of each page, which present voices and viewpoints of the colonized, again those not usually heard or seen.

Suggestions for Reading

History can be read in many ways. History books typically contain a single line of text telling a story in chronological order, with an occasional interruption of inserts. This book provides several points of entry, and there are numerous ways of reading it. Some readers will choose to go through a short section of the "historical context" column first and then go back to read the related "missing pages" column. Others will read the short excerpts in the middle column first and then read the historical context for background information. Still others may alternate between columns or begin by reading all of the inspirational quotes in the outermost column. The choice can be an individual one or one recommended by a group leader or teacher, depending on the background and skills of the readers. There is no one correct way, although it may be helpful to get an overview of the period by reading the historical context first. It is hoped that reading one column of text will inspire the reader to read the adjacent columns. We also hope readers will be interested enough to consult the sources we've used.

Audience

This book was developed with several audiences in mind. It can be used by an individual or by groups, which might be classes at the high school or college level or adult/community/church study groups in a less formal setting than school. A "strategies" section follows the text and includes ideas for responding to the material in each chapter. Readers are encouraged first to identify their present knowledge about the general topic of the chapter; second, to read and listen to the perspectives and voices presented; and finally, to engage actively in considering the critical meaning of this history for themselves and others. Reflective questions and activities, including role plays, debates, writing assignments, simulations, timelines, and brainstorming, may help readers connect their own lives and experience with new information. The facilitator of these activities might be a teacher or any member of a study group who will help to engage learners in the most critical level of discourse on controversial issues.

The above illustration is from El Primer Nueva Coronica y Buen Gobierno *by Felipe Huamdn Poma de Ayala. Ayala wrote his book to inform the King of Spain about the treatment of indigenous people in the colonies.*

Our Goal

Our primary intent is to engage readers, to challenge them to examine their knowledge and assumptions about the history of a certain time and a certain place. We will be successful if students and readers become seriously critical of their own knowledge base and begin to confront the ways their lives are affected and influenced by their understanding. This book is not meant to be read passively or discussed as mere interesting but irrelevant bits of new information. The material presented here is meant to challenge us to understand and appreciate the last five hundred years in American history from vantage points to which many of us have not been privileged. Furthermore, it is meant to help us realize how present economic, social, and cultural realities of the lives of all Americans, the dominant and the disenfranchised, are intimately connected to the events described. This book is meant to engage us in serious reflection on and questioning of our own knowledge and perspectives, ultimately leading us to a clearer realization of the way we are also actors today in maintaining or altering that history and those realities. With Tolstoy, we must ask, "What then must we do?"

This material will undoubtedly raise strong reactions. A deep level of engagement is required to make this history come alive and be a catalyst for change. "Dangerous memories" remain dangerous only if they are not allowed to emerge and be heard.

Memories frame perspectives. This book is meant to frame new perspectives in places where the old ones have fooled us—and failed us.

The Authors

The Western Hemisphere Before the Conquest

It is difficult to get an accurate picture of the inhabitants of the lands visited by Columbus for two reasons: overall, they were very quickly destroyed, and most of the words we have on the subject were written by the Europeans who were responsible for that destruction. The current state of knowledge about pre-Columbian civilization in the Western Hemisphere reflects scholars' fairly recent attempts to describe the cultures found by Europeans in a fair and nonjudgmental way.

Length of Habitation

For a long time learned writers wanted to justify the conquest by pretending that the hunting and gathering tribes existing in what became the Americas had only recently migrated from Asia over the Bering Strait and therefore had little claim to the vast resources of the "new world." If the explorers and colonizers found only a seemingly endless, relatively unpopulated wilderness, they were clearly entitled, indeed mandated by the presumptions of their own culture, to tame it. And furthermore, if the groups of human beings they encountered were unorganized, unskilled, unchurched, unschooled—in short, "primitive"—then the colonizers had every right to share their superior civilization. According to this line of reasoning, massacres and murders were necessitated by the resistance of the subjects of their generosity.

Iroquois wooden mask

A Multiplicity of People

Civilization in America emerged from certain centers, just as it did in the three other major continental land masses of the world. These centers tended to incorporate groups and territory on their peripheries, sometimes in growth spurts that led to periods of integration, sometimes very gradually through periods of decline and disintegration. The shifting of boundaries and control in the Western Hemisphere resembled that in Europe and Asia, especially in that it occurred over thousands and thousands of years.

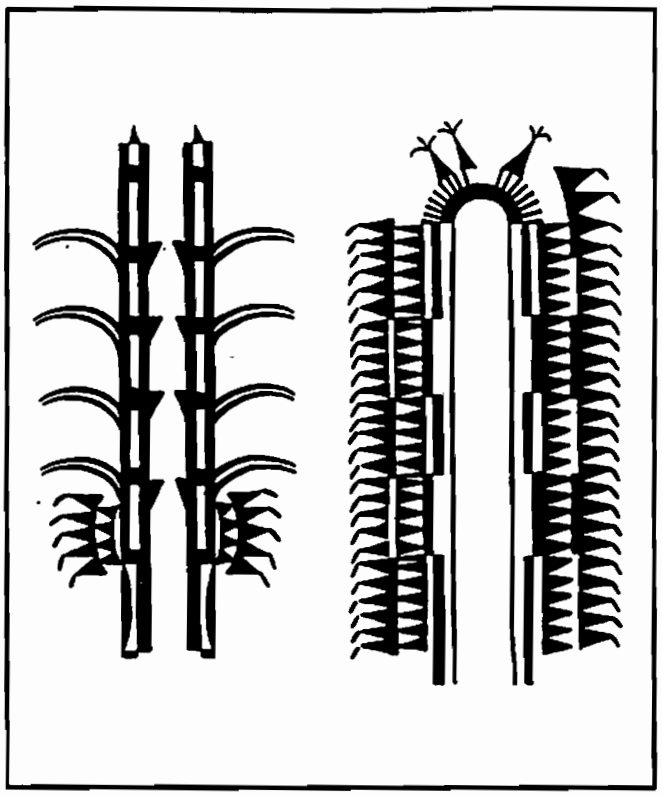
Naming every tribe and nation and giving their characteristics would require a huge amount of space. The following list is not intended to be exhaustive, but it gives an idea of the number and variety of groups in the Western Hemisphere at the time of the conquest. Several centers can be identified:

Indians are traditionally viewed as natural features of the land, rather like mountains or rivers or buffalo or troublesome, if colorful, wild varmints, affecting American history only by at times impeding the civilizing progress of advancing settlers.

William Brandon, *The Last Americans*, 1

The Iroquois Confederacy

- At first five, eventually six nations formed from thousands of agricultural villages from the Great Lakes to the Atlantic and south to the Carolinas.
- Population around two million.



Quillwork of the Blackfoot Indians

[The Iroquois Confederacy] was a highly structured state system which allowed the multi-ethnic state to incorporate many diverse peoples and nations. Undoubtedly, it would have continued to incorporate and annex other peoples in North America. The remarkable aspect of the Iroquois state was its ability to avoid centralization by means of a clan-village system of democracy, based on collective ownership of the land; its products, stored in granaries, were distributed equitably to the people by elected authorities. "Clan mothers" played the key role of supervising all activities, having the final veto on any decision.

All material in italicsis is from
Roxanne Dunbar Ortiz, *Indians of the Americas*, 2-8

Eastern Woodland Indians

- Many diverse groups who lived along the eastern coast, from Nova Scotia to Florida, and west to the Great Lakes.
- Three large language stocks: Algonquian, Iroquoian, and Siouan; included the Delaware, Ojibway/Chippewa, Sauk, Fox, Menominee, Kickapoo, Illinois, Winnebago, Shawnee, Seminole, Creek, as well as thirty or forty more nations.
- Population hard to estimate since thousands were obliterated before awareness of them was developed; certainly in the hundreds of thousands, possibly half a million or more.

Now it is generally agreed that human beings have lived on the American continent for at least twenty thousand years and possibly as much as twice that long. They may indeed be the oldest known people on earth (Brandon, 26).

Scholars disagree about where they originated. It is possible that they crossed to what is now Alaska from what is now Siberia, using a land bridge exposed by the lowering of the ocean during the last Ice Age. Moving southward and populating the whole continent took thousands of generations, until much, much later, by the late fifteenth century, many diverse cultures and civilizations with very long histories occupied the land mass of which Europe knew nothing.

Number and Variety

Population estimates range widely, but a rough academic consensus now maintains that between ninety and one hundred twenty million people lived in the Americas before Columbus's voyage, compared to sixty to seventy million people in Europe at the same time (excluding Russia).

The extraordinarily rich variety of cultures had adapted not only to their wide range of physical environments but also to each other. Some were gentle and peaceful, some were fierce and quarrelsome, some were reserved in their demeanor, some were emotional. Some remained hunters and gatherers, others developed kingdoms and empires.

Languages

Groups in the Western Hemisphere spoke some two thousand distinct languages at the time of the conquest, some as different from one another as Chinese and English. In the entire "old world" about three thousand languages are known to have existed at the end of the fifteenth century. The languages of the "new world" can't be classified as primitive, in vocabulary or in any other respect.

"Whereas Shakespeare used about 24,000 words, and the King James Bible about 7,000, the Nahuatl of Mexico used 27,000 words, while the Yahgans of Tierra del Fuego, considered to be one of the world's most retarded peoples, possessed a vocabulary of at least 30,000 words" (Stravianos, 213-214).

Characteristics

Although generalization is risky because of the variety of lifestyles and systems represented in the many pre-Columbian cultures, it's safe to say that at least some of the cultures of the "new world" exhibited admirable characteristics. People in those ancient societies tried to live according to the moral principles agreed on by their forebears. Among many groups freedom and equality prevailed, with no division between rich and poor, no form of servitude, no money, no meddling governmental bureaucracy, no private property. In many cases governments were established to promote the general good, not to create a state apparatus for repression.

Political organization of these seminomadic town dwellers took the form of large confederacies such as the Three Fires, composed of the Ojibways, Potawatomis, and Ottawas on the eastern end of Lake Superior. Wide trade networks were well established. The people were skilled in hunting; they also cultivated wild rice, squash, corn, and other crops. They developed snowshoes, used birch bark to build canoes and houses, and produced maple syrup. They introduced wampum, seashells strung on strings or braided into belts, used for trading and also as a way of remembering for a non-literate society; for example, belts might embody the terms of treaties in the symbolic placement of the shells. Some tribes were matrilineal; some created clans claiming descent from the spirit of an animal, or special societies formed for a specific purpose such as war or healing. Occasional wars or battles gave the erroneous impression to early settlers that all these people were warlike; the French and English used ancient enmities to turn tribes against each other.

Peoples of the Plains and Prairies

- Several centers of state development, from West Texas to the sub-Arctic.
- Cree in prairies of Canada, Lakota and Dakota (Sioux) in present-day North and South Dakota, Cheyenne and Arapaho to the west and south.
- Human population approximately one million; bison population around eighty million.

Many other bison-hunting peoples occupied various parts of the territories, and territorial disputes occurred. Some peoples, such as the Potowatomie, turned almost entirely to commerce. These groups tended to be peacemakers and negotiators in disputes, speaking many languages, perhaps originating the sign language which became universal in the Western Hemisphere in pre-colonial times.

Fishing Peoples of the Pacific Northwest

- Included the Tlingit, Hoopa, Poma, Karok, and Yurok peoples.
- Total population of four million.

A state system as such is not apparent, although their ceremonial and trade linkages could have supported some sort of state structure. These were wealthy people living in a paradise of natural resources. . . . These people are also the inventors of the potlatch, the ceremonial destruction of accumulated goods, and of the gigantic totems and masks.

Painted paddle of the Tlingit

The great sea has set
me in motion.
Set me adrift,
And I move as a weed
in the river.

The arch of sky
And mightiness of
storms
Encompasses me,
And I am left
Trembling with joy.

Eskimo Song

The mountains,
I become part of it
. . . the herbs, the
fir tree,
I become part of it.

The morning mists,
the clouds, the
gathering waters,
I become part of it.

The wilderness,
the dew drops,
the pollen. . .
I become part of it.

Navajo chant

Villages Between the Two Great Mountain Ranges

- Nez Perce, Blackfeet, Shoshones, Utes, Paiutes and others.
- Inhabited difficult terrain, developed clan-based democratic communities which shifted habitation according to animal migrations and seasons.
- Around two hundred thousand people.

Peoples of the Southwest

- Desert and alpine arid and semi-arid region, fragile land base suffering from drought.
- One to two hundred city-states maintained by Pueblo and Hopi Indians, living according to the "right way": moderation, industry, peaceful interactions.
- Developed vast irrigation systems, including extensive leak-proof canals.
- Also home for the Athabascans (Navajos and Apaches), who hunted and traded, interacted and intermarried with the Pueblo peoples and became involved in the inter-village fights and wars engendered by disputes over water usage and territory.
- Numbered around two hundred thousand.

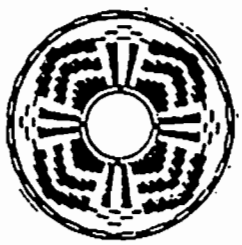
Major Nations of the Southeast

- One of the most fertile agricultural belts in the world, from the Atlantic Ocean to the Gulf of Mexico along the southeast portion of what is now the United States.
- Muskogee-speaking Choctaw, Creek, and Chickasaw in the south center; Algonquin-speaking Cherokee in the east; Natchez in the west.
- Five major nations, a thriving civilization in 1492.
- Total population of at least two to three million.

These states functioned in a confederacy similar to that of the Iroquois, with decision making based on popular consensus. Among these groups were mound builders who created massive communal graves and temples; it is possible that they had contact with Mayans or other groups in Central America.

The Toltec Nation

- Appeared around two thousand years ago in central Mexico, creating great cities.
- After flourishing for two centuries, wiped out by invaders who waged war among themselves.



Hopi Tray

Attitudes toward Property

One very basic difference between the two worlds, the one known to Europeans and the one unknown, was the attitude toward property.

With some notable exceptions, the European way of life had developed into a focus on individual competition for the acquisition of property. What motivated the early colonizers was desire for gold and other minerals, for land as a means of production, for labor to extract or create wealth and commodities, and for all the other promised riches of the newly discovered territory. From humble settlers looking for small land-holdings to powerful forces of land and mineral speculation, all white frontier expansionists understood the advantages of owning property.

The basic attitude of the inhabitants of the unknown world (also with some notable exceptions) seems to have focused more on cooperation, using property in common rather than competing to acquire private property. In many of the native groups, all members seemed to live as equals, with no hierarchies or class structure. Societies emphasized the nonmaterial satisfaction of being in harmony with nature; individuals didn't appear to work very hard. The profit motive was far from primary.

"It might be said, in sum, that the Indian world was devoted to living while the European world was devoted to getting. This may be the essence of the Indian world and image" (Brandon, 8).

For instance, the people referred to as the Incas, one

of the most highly developed civilizations according to European criteria, valued harmony with the universe as the chief goal of life. Their intricate political organization relied on two principles: reciprocity and redistribution.

Reciprocity, the mutual exchange of gifts, was important to the *ailyus*, groups united by kinship ties, that formed the basis of society. Gradually, these small groups organized into much larger units and fed into a central government which had a high respect for local institutions. Farmers paid a tribute from their surpluses to a coordinating center, responsible for storing the collected produce and redistributing it to local chieftains in time of need (Wachtel, 61).

Meaning of the Land

The land that Europeans coveted and eventually took away from the Indians had totally different meanings to the two cultures. To the Indians land was sacred, obviously precious and life-giving and worthy of special reverence, with holy spots that evidenced the oneness of all creation. The souls of the ancestors were mixed with the soil.

"In a way that few Europeans could understand, the land <u>was</u> Indian culture: it provided Native Americans with their sense of a fixed place in the order of the world, with their religious observances, and with their lasting faith in the importance of the struggling but united community as opposed to the ambitious, acquisitive individual" (Segal and Stineback, 28).

Huge buildings, sculptures and markets made up the cities, which housed vast universities and libraries. Their written language was [a forerunner to the later] Mayan form, as was the calendar used in scientific research and study.

The Aztec Nation

- Expanded through wars of conquest to an area from the Gulf of Mexico to the Pacific and northwards.
- Population of some thirty million.

Our house on earth
we do not inhabit

only borrow it
briefly

Aztec poem

The economy was based on hydraulic agriculture, with corn (maize) as the central crop and many others such as beans, pumpkins, tomatoes, cocoa, tobacco, and cotton, which provided the fiber for all cloth and clothing. The Aztecs created works of art and useful commodities of cloth and metal, built huge stone dams and canals as well as fortress-like castles, had huge markets in each city and a far-flung trade network, using turquoise for exchange. They developed a sophisticated political organization: the land was owned in common and worked by commune members, who lived in clans and elected leaders, including the principal commander of the military who was also the main political and religious leader.

By the late fifteenth century Aztec dominance was in a process of decay. Constant warfare had many negative effects: the equitable distribution of wealth was skewed by rewards of property and land given to distinguished warriors; slavery was becoming an essential institution, with prisoners of war used as slaves; formerly elected offices were being transformed into hereditary ones by the emergence of a clan nobility. The clan structure itself gradually disintegrated, with a corresponding emergence of a class society, similar to the state development taking place in Europe at the same time. Most slaves taken in conquest were used for human sacrifice; eventually the dominant religious cult required the daily human sacrifice of thousands of people to the Sun God.

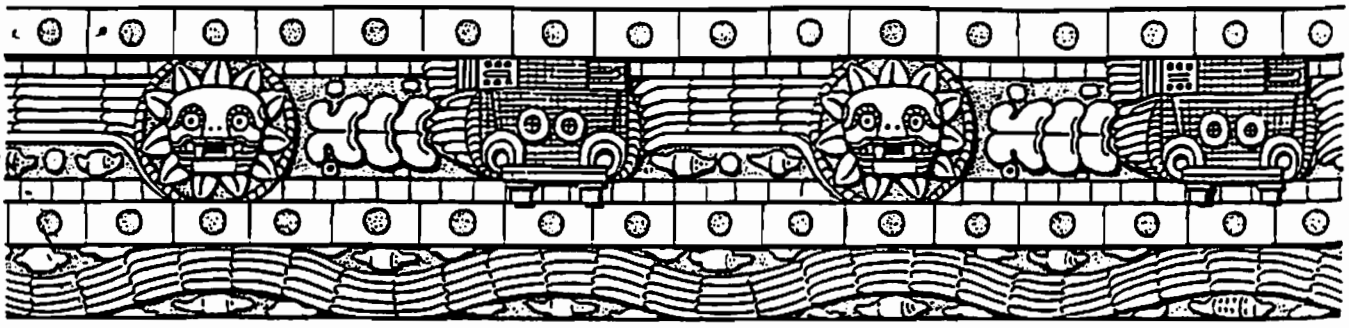
At the time of the conquest, peasant uprisings were increasing and intensifying all over Mexico; Montezuma II, who came to power in 1503, was making an attempt to reform the regime.

Detail from Temple of Quetzalcoatl

Mayan Civilization

- Prospered for five centuries in the northwest of what is now Central America.
- Population around ten million.

Mayan culture, often compared to that of Greece in the golden age of Athens, amazes everyone who studies it.



Above illustration: Detail from Temple of Quetzalcoatl

The cultivation of corn was its basis, so essential that a religion was constructed around this vital food. However, methods of agriculture never became more technically sophisticated than slash and burn: hacking down and burning trees and brush, planting a cornfield in the rough clearing, and then repeating the process in another place in a few years.

The Mayans used a variety of materials, including gold and silver, in their highly-developed art, architecture, sculpture, and painting. But it is in the realms of mathematics and astronomy that their achievements are the most impressive. The calendar system developed by the Mayans was one-thousandth of a day per year more accurate than the one we use now, and they were familiar with the concepts of positional numbers and zero, unknown in Europe for another thousand years. They also had a written language with hieroglyphic ideographs, conventionalized symbols standing for certain words, as in Chinese writing, and possibly some symbols representing sounds like modern alphabets.

There was a distinct commercial class, and the cities were authentic urban centres, not simply bureaucratic or religious ones; but ordinary Mayans retained the fundamental features of a clan structure in their communities. They were required to work in the nobles' fields and to pay them rent for use of the land, and also to contribute to the building of roads, temples, noblemen's houses, and other structures. It is not clear whether these relations of production were exploitative or democratically and co-operatively developed. It is clear that certain groups, such as war prisoners, criminals, debtors and orphans were used as slaves, and although easily freed and not hereditary, features of slave-dependence for labour were apparent.

The Caribbean Basin

- Important as the place Columbus first landed.
- Total population of at least several million.

This region, like the resource-rich and temperate Pacific northwest, was a virtual paradise where hunger and want were unknown. Tied by cultural, clan, and trade bonds,

Identification with the land in no way implied ownership. The concept of owning the land was as foreign to the Indians as the idea of owning the air would be to us. The early inhabitants had an intimate and abiding relationship with nature that colored their view of humans as only one of many species participating in an intricate web of life. The rituals, myths, and ceremonies passed down through the ages that helped individuals understand their obligations and responsibilities played a primary role, at the very center of existence.

Living on the land required conscious caretaking, a finely-tuned sense of balance, and respect in such everyday activities as hunting, farming, and foraging.

Importance of Giving Gifts

The generosity of the Indians was extolled by Columbus and other early explorers. It was a natural product of the understanding among natives that life depended on the largesse of nature. Grateful recipients of good harvests and successful hunting expeditions routinely shared their bounty with others in the ritual known as "potlatch" among Northwest Coast Indians.

Detail from a painted Mayan vase

The formal distribution of food and other goods to the community was deeply engrained in the society and went beyond mere customs of hospitality; the colonizers benefited greatly from its practice.

The Natives Who Welcomed Columbus

The natives who rowed out to investigate the strange intruders in their gigantic ships, greatly overdressed for the climate and so eager to display the power of their weapons, were Tainos, related to a larger group known as Arawaks. Evidently they were peaceful and agricultural, living in houses built of perishable materials such as reeds and palm trees.

Some of their household implements have been recovered: small stones chipped and carved in the shape of chisels, gouges, spearheads, hoes, and knives; mortars and pestles, the latter with carved heads, possibly idols; beads of stone and oyster shell and fragments of pottery.

Frederick Ober, commissioned in 1890 as a special representative of the World's Columbian Exposition to follow the path taken by

there may have been state developments or federations that have not been detected; the pre-colonial cultures in the Caribbean have been very little studied, since most were annihilated or merged with African populations during slavery.

Four Major Nation-State Formations in the Southern Continent

- The peoples of the Amazon basin.
- The Mapuche (Araucan) of the Pacific regions.
- The Guarani of Paraguay and Argentina.
- The peoples of the Inca state, present-day Bolivia, Peru, Ecuador, and Colombia.
- Total population fifty million.

The Incas were agriculturalists and stock-breeders, metal-workers and weavers, and notable architects; their science, mathematics, and medicine were much more highly developed than in Europe at that time. The Quechua language had a hieroglyphic script and books were published in it.

Road-building and trade were extraordinarily far-flung and developed in these highlands, where villages are at elevations of several miles. The main social unit in land tenure was the ayllu, or the commune, the members of which worked together to till the land which was distributed equitably to families. The Sapa Inca [leader of the state] was considered the owner of the land, and a portion of the harvest and animal produce went to the state to support its functions, both secular and religious.

The irrigation canals of the sierra and the coast and the agricultural terraces of the Andes, which survive to this day, are evidence of the degree of economic organization reached by the Inca state. As regards religion, the cult of Mama Pacha is considered to be on a par with the worship of the Sun. Like the Sun, Mother Earth represents no one in particular, with a correlation between communal ownership of land and the universal religion of the Sun.

All material in italics is from
Roxanne Dunbar Ortiz, *Indians of the Americas*, 2-8
See also William Brandon, *The Last Americans*

Nazca pottery

Columbus, reported on his findings, "There yet remain other articles to mention, which show that these barbarians did have among them, or were in communication with, skillful artisans who carved wonderful things in wood and stone, the like of which have not been found elsewhere. . . .

"When the Indies were discovered, all the common people sat on the ground in the presence of strangers, but . . . their chiefs made use of low seats, of stone or wood, carved in the shape of a beast or reptile, with very short legs, its head and tail erect, and with golden eyes" (Ober, 84).

Variety and Harmony

It is safe to say, then, that in the immediate world Columbus and his crew "discovered," human beings lived in harmony with nature and shared nature's bounty, and that the larger world later visited by other Europeans was characterized by a very large population and a wide variety of cultural patterns.

The Lands of the Western Hemisphere

Varied societies, in differing degrees of "civilization," ordering the lives of their members according to deeply held principles and beliefs, lived in the land mass unknown to Europeans, about to be "discovered" and forever changed. Pre-Columbian North America was fairly densely populated, as such cultures go, and certainly was not the empty wasteland and untouched wilderness that Europeans took it to be. . . .

. . . We must imagine a sizable population, such as the European invaders did not achieve until the 1840s, in some areas quite densely settled, that would have been trapping and shooting small game and game birds day after day for centuries, fishing any available stream and clamming any available coast, gathering fruits and nuts and roots of several hundred species over thousands of acres a year, hunting big game over hundreds of square miles with many thousands of pounds of meat every year (more than fifteen thousand for a village of four hundred in southern New England alone, one estimate suggests), ringing and burning trees and planting crops on a scale of perhaps an acre a person, clearing underbrush and driving animals by fires any one of which might be as much as twenty miles around, and, let us assume, occasionally blundering with a fire out of control or a hillside denuded for firewood or a well dried up from overuse—all that, and still occupying an environment that in important ways was ebullient and wild, abundant in both kinds and numbers of flora and fauna, functioning to all intents and purposes in its original primal state.

Kirkpatrick Sale, *The Conquest of Paradise*, 316-317

Pottery bowl of the West Indies

The Natives' View of the Land

The Indians say: The land has an owner? How's that? How is it to be sold? How is it to be bought? If it does not belong to us, well, what? We are of it. We are its children. So it is always, always. The land is alive. As it nurtures the worms, so it nurtures us. It has bones and blood. It has milk and gives us suck. It has hair, grass, straw, trees. It knows how to give birth to potatoes. It brings to birth houses. It brings to birth people. It looks after us and we look after it. It drinks chicha, accepts our invitation. We are its children. How is it to be sold? How bought?

Eduardo Galeano, *Memory of Fire: Genesis*, 225

Illustration on previous page: Incan poncho

Men of the Good

The following excerpts from an article by Jose Barreiros describe in some detail the culture that had enjoyed a long existence in the area where Columbus landed. Although the cultural patterns of the "new world" vary tremendously, this one, as the first to feel the effects of the conquest, is a key example of the values, lifestyles, and community organization practiced by many groups throughout the Western Hemisphere.

The word Taino meant "men of the good," and from most indications the Tainos were good. Coupled to the lush and hospitable islands over a millennium and a half, the indigenous people of "La Taina" developed a culture where the human personality was gentle. Among the Taino at the time of contact, by all accounts, generosity and kindness were dominant values. Among the Taino peoples, as with most indigenous lifeways, the physical culture was geared toward a sustainable interaction with the natural surroundings. The Taino's culture has been designated as "primitive" by Western scholarship, yet it prescribed a lifeway that strove to feed all the people, and a spirituality that respected, in ceremony, most of their main animal and food sources, as well as the natural forces like climate, season, and weather. The Taino lived respectfully in a bountiful place and so their nature was bountiful.

The naked people Columbus first sighted lived in an island world of rainforests and tropical weather, and adventure and fishing legends at sea. Theirs was a land of generous abundance by global terms. They could build a dwelling from a single tree (the Royal Palm) and from several others (gommier, ceiba), a canoe that could carry more than one hundred people.

. . . . The Tainos lived in the shadows of a diverse forest so biologically remarkable as to be almost unimaginable to us, and, indeed, the biological transformation of their world was so complete in the intervening centuries that we may never again know how the land or the life of the land appeared in detail. What we do know is that their world would appear to us, as it did to the Spanish of the fifteenth century, as a tropical paradise. It was not heaven on earth, but it was one of those places that was reasonably close.

The Taino world, for the most part, had some of the appearance that modern imaginations ascribe to the South Pacific islands. The people lived in small, clean villages of neatly appointed thatch dwellings along rivers inland and on the coasts. They were a handsome people who had no need of clothing for warmth. They liked to bathe often, which prompted a Spanish royal law forbidding the practice, "for we are informed it does them much harm," wrote Queen Isabella.

The Taino were a sea-going people, and took pride in their courage on the high ocean as well as their skill in finding their way around their world. They visited one another constantly. Columbus was often astonished at finding lone Indian fishermen sailing in the open ocean as he made his way among the islands. Once, a canoe of Taino men followed him from island to island until one of their relatives, held captive on Columbus's flagship, jumped over the side to be spirited away.

Among Tainos, the women and some of the men harvested corn, nuts, cassava, and other roots. They appear to have practiced a rotation method in their agriculture. As in the practice of many other American indigenous ecosystemic peoples, the first shoots of important crops, such as the yucca, beans and corn, were appreciated in ceremony, and there are stories about their origins. Boys hunted fowl from flocks that "darkened the sun," according to Columbus, and the men forded rivers and braved ocean to hunt and fish for the abundant, tree-going jutia, the succulent manati, giant sea turtles and countless species of other fish, turtles and shellfish. Around every bohio [hut], Columbus wrote, there were flocks of tame ducks (yaguasa), which the people roasted and ate.

. . . . The Taino world of 1492 was a thriving place. The Taino islands supported large populations that had existed in an environment of Carib-Taino conflict for, according to archeological evidence, one and a half millennia, although the earliest human fossil in the region is dated at fifteen thousand years. Tainos and Caribs may have visited violence upon one another, and there is little doubt they did not like each other, but there is little evidence to support any thesis that genocidal warfare existed in this world. A Carib war party arrived and attacked, was successful or repulsed, and the Tainos, from all accounts, returned to what they were doing before the attack. These attacks were not followed up by a sustained campaign of attrition. . . .

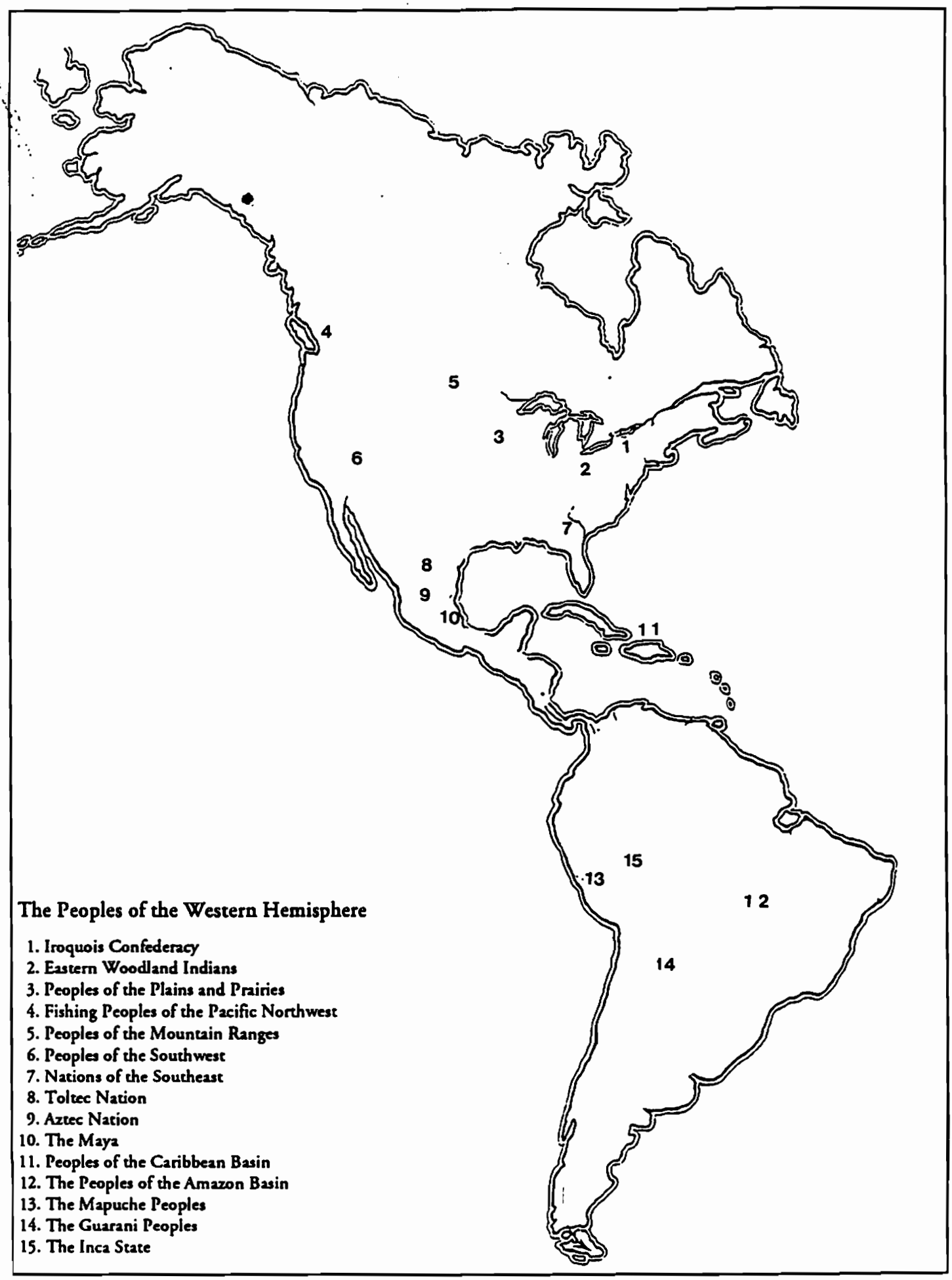
Early descriptions of Taino life at contact tell of large concentrations, strings of a hundred or more villages of five hundred to one thousand people. These concentrations of people in coastal areas and river deltas were apparently well-fed by a nature-harvesting and agricultural production system whose primary value was that all of the people had the right to eat. Everyone in the society had a food or other goods producing task, even the highly esteemed *caciques* and *behiques* (medicine people), who were often seen to plant, hunt, and fish along with their people. In the Taino culture, as with most natural world cultures of the Americas, the concept was still fresh in the human memory that the primary bounties of the earth, particularly those that humans eat, are to be produced in cooperation and shared.

. . . . Like all American indigenous peoples, the Taino had an involved economic life. They could trade throughout the Caribbean and had systems of governance and beliefs that maintained harmony between human and natural environments. The Tainos enjoyed a peaceful way of life that modern anthropologists now call "ecosystemic." In the wake of recent scientific revelations about the cost of high impact technologies upon the natural world, a culture such as the Taino, that could feed several million people without permanently wearing down its surroundings, might command higher respect.

. . . There was little or no quarrelling observed among the Tainos by the Spaniards. The old *caciques* and their councils of elders were said to be well-behaved, had a deliberate way of speaking and great authority. . . . The peoples were organized to the gardens *(conucos)* or to the sea and the hunt. They had ball games played in *bateyes*, or courtyards, in front of the *cacique's* house. They held both ceremonial and social dances, called *areitos*, during which their creation stories and other cosmologies were recited. Among the few Taino-Arawak customs that have survived the longest, the predominant ideas are that ancestors should be properly greeted by the living humans at prescribed times and that natural forces and the spirits behind each group of food and medicinal plants and useful animals should be appreciated in ceremony.

As can be seen throughout the Americas, American indigenous peoples and their systems of life have been denigrated and misperceived. Most persistent of European ethnocentrisms toward Indians is the concept of "the primitive," always buttressed with the rule of "least advanced" to "most advanced" imposed by the prism of Western Civilization—the more "primitive" a people, the lower the place they are assigned in the scale of "civilization." The anti-nature attitude . . . [inherent in this idea] came over with the Iberians of the time, some of whom even died rather than perform manual labor, particularly tilling of the soil. The production and harvesting of food from sea, land, and forests were esteemed human activities among Tainos. As with other indigenous cultures, the sophistication and sustainability of agricultural and natural harvesting systems was an important value and possibly the most grievous loss caused by the conquest of the Americas.

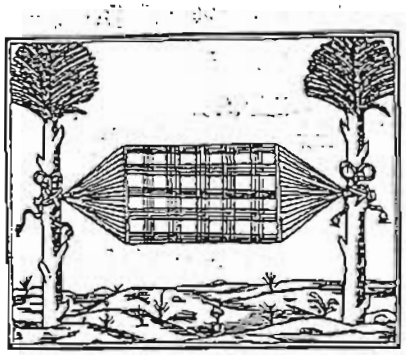
Jose Barreiro, "A Note on Tainos: Whither Progress?" *View from the Shore: American Indian Perspectives on the Quincentenary, Northeast Indian Quarterly*, 7:3 (Fall, 1990), 66-71

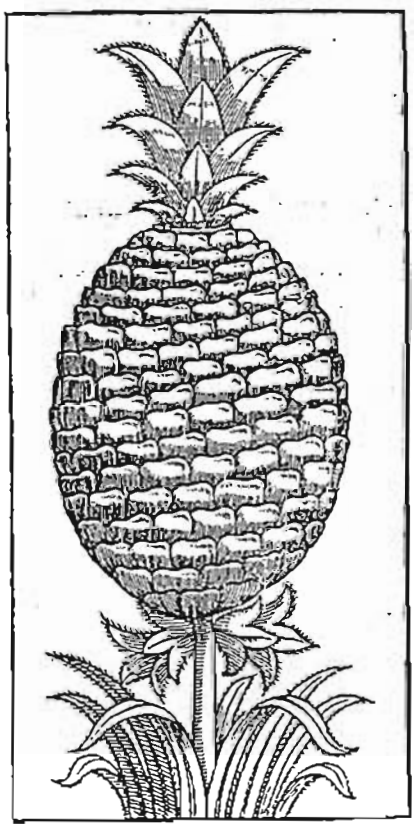


The Peoples of the Western Hemisphere

1. Iroquois Confederacy
2. Eastern Woodland Indians
3. Peoples of the Plains and Prairies
4. Fishing Peoples of the Pacific Northwest
5. Peoples of the Mountain Ranges
6. Peoples of the Southwest
7. Nations of the Southeast
8. Toltec Nation
9. Aztec Nation
10. The Maya
11. Peoples of the Caribbean Basin
12. The Peoples of the Amazon Basin
13. The Mapuche Peoples
14. The Guarani Peoples
15. The Inca State

Alphabet of Things that the Americas Gave to the World





A avocado, amaranth, asphalt
B buffalo, beaver pelts, brazilian dye
C canoe, corn, caucus, chocolate, cocoa, cassava, chicle, cotton, cashews, chayotes, catfish, chilis, cayenne
D democracy, dyes, dog sleds
E ecology
F fertilizer, food preservation
G gum, guano deposits, grits
H hammock, hominy, hickory nut
I impeachment, ipecac
J jerky, Jerusalem artichoke
K kidney beans, kayaks
L libraries, long pants, llamas
M milpa, moccasins, manioc, medicines,
N nuts, names (half the state names of USA)
O Oklahoma
P potatoes, parrots, pumpkins, peanuts, popcorn, pineapple, passenger pigeon, pear cactus, parkas, peppers, pomegranate, passion fruit, papaya, pecan, paprika
Q quinine, quinoa
R rubber
S squash, silver, sisal, sunflowers, sweet potatoes, succotash
T turkey, tapioca pudding, tomatoes, tortillas, tobacco, tar
U USA Constitution (influenced by Iroquois)
V vanilla
W wild rice, witch hazel, words (several thousand words in English and Spanish), white potatoes
X xylophone (the marimba of both African and American origin)
Y yams
Z zero, zucchini

Source: Jack Weatherford, *Indian Givers*, Crown, New York, 1988.

Anonymous engraving

The selling of sweet-meats and herring

Europe Before the Conquest

To understand the invasion of the lands known to us as the Americas, it is necessary to know something about Europe at the end of the fifteenth century. In many ways it was a place under siege.

End of the World

Most Europeans were far from rich, and their lives were marked by violence, disease, and famine. The belief that the world would end soon was taken quite seriously. In fact,

Life in Fifteenth Century Europe

Not many children lived even to maturity. About half, and not just the poor, died in their first year. If you lived longer, poor diet, disease, and violence threatened to cut life short.

Food supplies were scanty. The usual meal was bread dipped in a thin vegetable soup. To eat fresh meat more than a dozen times a year was very uncommon. Milk, butter, and cheese were too expensive. The family pig was not eaten at home but sold for much-needed cash. The landowners savagely punished poaching for game or fish. If you didn't starve to death, malnutrition was almost sure to keep you so weak you fell prey to disease.

If disease didn't get you, violence might. The frequent wars of this period organized violence on a large scale. On their way to and from battle, armies ravaged the countryside. Bandits attacked travelers and held whole villages for ransom. Violence was a poison running through the bloodstream at all levels of society. People were killed casually in quarrels, for cheating in gambling, over malicious gossip, in drinking bouts, and in urban riots.

Milton Meltzer, *Columbus and the World Around Him*, 31

Death

The general devastation was so great that a famous demonic preacher and rabble-rouser, Savonarola, could say, in 1496:

There will not be enough men left to bury the dead; nor means to dig enough graves. So many will lie dead in the houses, that men will go through the streets crying, "Send forth your dead!" And the dead will be heaped in carts and on horses; they will be piled up and burnt. Men will pass through the streets crying aloud, "Are there any dead? Are there any dead?"

Quoted in Kirkpatrick Sale, *The Conquest of Paradise*, 34

. . . And Despair

Always and everywhere in the literature of the age, we find a confessed pessimism. As soon as the soul of these men has passed from childlike mirth and unreasoning enjoyment to reflection, deep dejection about all earthly misery takes their place and they see only the woe of life.

Huizinga, *The Waning of the Middle Ages*, 138
Quoted in Kirkpatrick Sale, *The Conquest of Paradise*, 31

Preparation for Overseas Conquest

The Europeans were not the first to undertake sea voyages. In fact they learned valuable techniques from the Arab world and others.

Inuit (Eskimo) plied the entire Arctic circle in their rapid kayaks for centuries and made contacts with many peoples, as

preoccupation with morbid subjects was so great that it was given a name, "the culture of death."

Christopher Columbus concluded, from his extensive study of the Bible and theologians of the time, that Armageddon had a date: it would occur in 1650. There were good reasons for such melancholy.

Violence

Common folk routinely suffered acts of violence from each other in the form of robberies and murders. Revenge was sweet, especially if it came in the form of a public spectacle. Crowds got perverse enjoyment from watching criminals being tortured and then executed on scaffolds in public squares.

The many different units of society contending for domination also constantly fought with each other: earidoms, republics, duchies, noble families, and all kinds of factions engaged in "kidnapping, torture, mutilation, fratricide, patricide, assassination, and fomented rebellion" (Sale, 33).

In addition to these battles among themselves, those who had any power at all didn't hesitate to use it against their disobedient subjects or fellow citizens who had the misfortune of being out of favor. Wars on a large scale were commonplace as newly organized nation-states vied for power.

Disease and Famine

For centuries the Black Death had ravaged the countryside of Europe. By 1450 the population was just beginning to grow back to its preplague levels. Other epidemic diseases also scourged humanity as a direct result of unsanitary and crowded living conditions, general uncleanliness and ignorance, and the constant waging of wars.

Hundreds of thousands also died every year of hunger during recurrent famines when the main crops of wheat and barley failed. The landscape was riddled with pestilence, war, and death. No wonder people whose daily experience was chaotic and dangerous had a preoccupation with death.

Constant Warfare, Holy and Otherwise

Latin Christendom had waged war against Islam for eight hundred years, and portions of Europe, including parts of Spain, were still under Islamic control. The Moors, or Moslems, invaded the Iberian peninsula in 711 from North Africa and conquered it in only seven years. The next seven centuries saw almost constant fighting in what came to be known as the "reconquest." The goal of Christians was to expel from their territory not only the Moors but also others who challenged the prevailing version of Catholicism.

The Crusades, the series of campaigns fought from 1096 to 1291 to recover the Holy Land from the Moslems, were unsuccessful in their main goal but nevertheless had a powerful impact in that they

did Indian and Polynesian fishermen of the Pacific rim. Egyptians and Greeks and Norsemen knew the Atlantic and Indian Oceans.

What was different was the mindset of European merchants and heads of state. Their own society was set up in a hierarchy, in which domination of one class over another was an accepted way of life.

In a sense, the first people colonized under the profit motivation by the use of labour, before overseas exploitation was made possible, were the European and English peasantry. Indeed, whole nations, such as Ireland, Bohemia and Catalonia, were colonized. The Moorish nation, as well as the Judaic Sephardic nation, were physically deported by the Crown of Castile from the Iberian peninsula, an act that was accomplished, significantly, in 1492. All the institutions of colonialism, all the methods for relocation, deportation and expropriation, were already practiced, if not perfected.

Roxanne Dunbar Ortiz, *Indians of the Americas*, 9

The colonization is a story of military conquest carried out by a people possessing vastly superior arms against sometimes practically unarmed populations, of subduing and sometimes exterminating those populations, of appropriating their land and their labor to the ends of the conquerors.

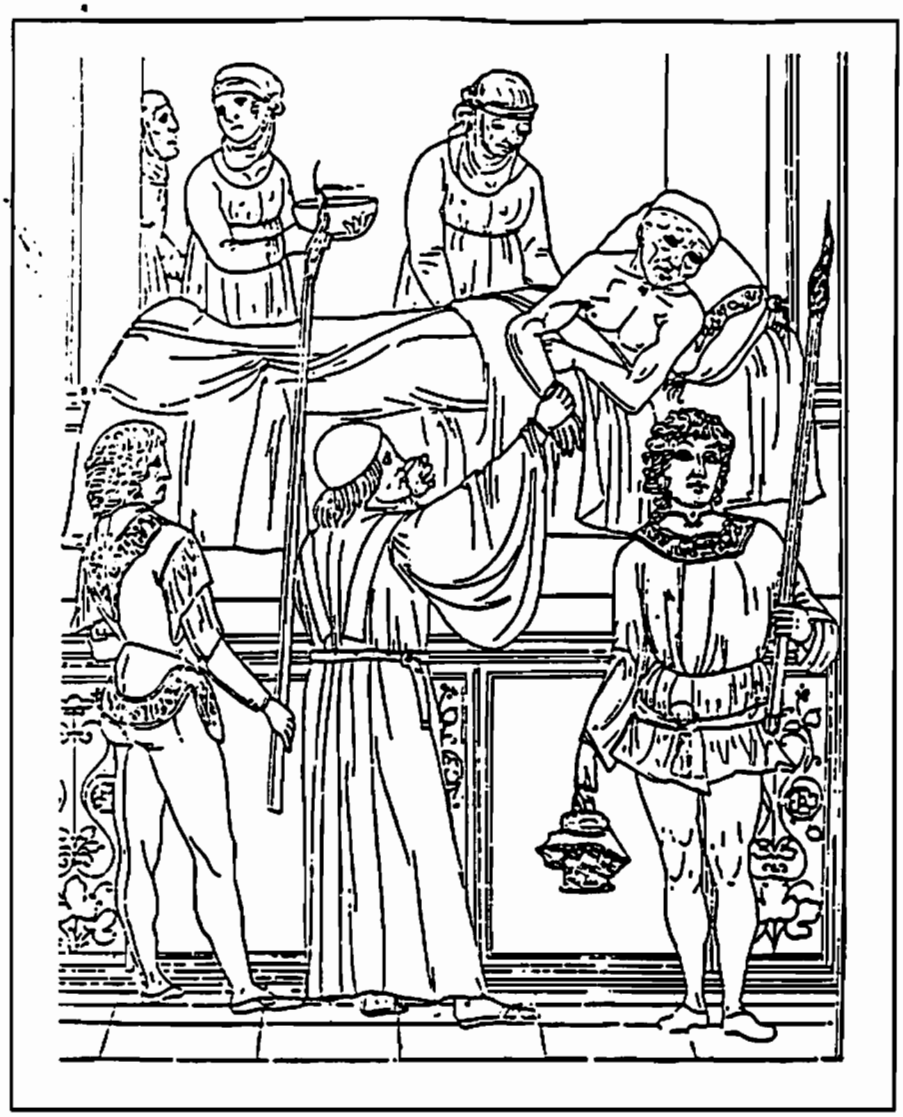
John Mohawk, "Discovering Columbus: The Way Here," *View from the Shore*, 45

The Transformation of Society

The reconquest prepared Spain for its task of conquering a native population. Necessitating almost continuous fighting, the reconquest advanced not by townships but by great regions, emphasizing their importance as the basic unit of Spanish national life and contributing to the rise of nationalism.

Though capable leaders' unity, self-reliance, and resettlement all helped to achieve the Reconquest, the most important factor was probably the willingness of Christian Spaniards to transform their society for this purpose. This transformation was extremely thorough. Late medieval Castile became essentially a society organized for war, a dynamic military machine which would function well so long as it had more lands to conquer. It might be disconcerted by military defeats, but it could survive them. . . .

Only Spain was able to conquer, administer, Christianize and europeanize the populous areas of the New World precisely because during the previous seven centuries her society had been constructed for the purpose of conquering, administering, Christianizing and europeanizing the inhabitants of al-Andalus.



Above illustration: Attending a victim of the Bubonic Plague

Thus if the Reconquest is important in Old World history because it is the primary example of the reversal of an Islamic conquest and because it fostered the transfer of Greek and Asian culture to western Europe, in the general sweep of world history it is vital because it prepared the rapid conquest and europeanization of Latin America.

D.W. Lomax, *The Reconquest of Spain*, 173-178, *passim*
In *1492: Discovery/Invasion/Encounter*, 8

Military Advancements

The constant waging of local conflicts, advancement in existing technologies, and general agreement throughout diverse communities that experimentation was not only acceptable but also inevitable led the nation-states of Europe in the direction of developing new technologies of warfare.

opened the way to a larger world. The many nobles, knights, servants, and churchmen who participated returned from their quest with fantastic tales of great cities and lavish stores of consumer goods.

Trade

As a result of contact with the East, Europe began a brisk trade, centered on the Mediterranean Sea. Venice and Genoa were in the best geographic position to monopolize business arrangements with the powerful Moslem rulers. By the time of the fall of Constantinople in 1453, wealthy Europeans had become enamored of such luxuries as teas, spices, silk, gold, and jewels, and Portugal and Spain wanted to open up their own routes to the riches so they wouldn't have to pay middlemen.

Changes in Spain

Spain itself went through tremendous upheaval during the reconquest. The bulk of the population had converted to Islam, but from tiny remnants of the old regimes grew the mighty kingdoms of Léon, Castile, Aragon, and Portugal, determined to reconquer the whole territory. At the same time, all the various rulers waged wars among themselves, vying for power and internal domination. In retrospect it seems that Spain was preparing itself for the conquest of a new continent, although any notion that such a place existed would have been labeled dreaming in the fifteenth century.

Nationalism

The rise of nation-states and, eventually, nationalism also helped set the stage for conquest.

The disintegration of the Roman Empire in Europe had led to a decentralization of government that in turn led to a fragmentation of power. As the weak sought protection from the strong, the strong forced the weak to do their bidding. The feudal system arose as the method of organizing society after centuries of struggle when Europe was invaded over and over. Peasants suffering from constant encroachment by marauders entered into arrangements with more powerful lords, giving them their land and their service (including military service) in return for protection.

However, the concept of feudalism can't be limited to the single institution of vassalage and lordship. Nor does the term "feudal system" imply that the arrangement was systematic. Patterns varied greatly.

The modern nation-state of Spain was unified by the political marriage between Ferdinand, heir to the throne of Aragon, and Isabella, heiress to the throne of Castile, in 1469 (they met four days before the wedding). From 1479 on, they ruled as "the Catholic monarchs."

The only part of the country not under their control was Granada, the last remnant of the Moorish Empire, established in the ninth century. They used that problem to their advantage, organizing war-hungry barons and nobles to conquer Granada. But when Granada fell in 1492, the war machine ran out

The introduction of new weapons set into motion an arms race which has continued to the present. As new military technologies were introduced the players were forced to buy the new weapons and adopt the new techniques or face annihilation on the battlefield. Each new offensive weapon was countered with a defensive weapon or formation. Huge cannon balls capable of smashing projectiles through thick masonry walls were countered with earthworks which proved impervious to cannonballs. As states grew in size and wealth, the ambitious among them acquired the weapons and armies which helped to spur their growth during periods when offensive weapons overwhelmed defensive ones.

John Mohawk, "Discovering Columbus: The Way Here." *View from the Shore*, 39-40

Patterns of Feudalism

Feudalism in Europe consisted of a wide variety of social organization with two common elements:

1. The individual received protection in return for his personal service to a stronger, richer man.
2. Ownership of land, or some other valuable commodity, passed from the original, weak owner to the lord.

The destruction caused by whole groups of people marching over the countryside and waging war was a prologue to the feudal era. After each conflict new fragments of territory were taken over by someone. Eventually "Europe" became merely a name for a bewildering variety of communities, some autonomous, some interconnected, identified by different terms: the manor, the city, the church, business, the military.

Feudal process was the incessant wrestling within and between these communities to establish relations of dominance and dependency. In such a world the ordering restraints of religion and law often became mere instruments for conquest, petty or grand.

Francis Jennings, *The Invasion of America*, 4

Patterns of Conquest

When the Spaniards entered a village in the "new world," they followed a routine first developed in the Canary Islands called the *requerimiento.* The invaders read outloud, in Spanish or in an appropriate translation if they knew the native language, a formal document that announced their arrival and their intentions and then offered the natives a choice: accept Christianity and Spanish rule or suffer enslavement and/or death.

The experiences of the reconquista had led to the formulation of an elaborate code of rules about the "just war," and the rights of the victors over the vanquished population, including the right to enslave it. These rules were extended as a matter of course to the Canary Islands. The conquerors of the Canaries used, for instance, the strange technique of the requerimiento, which was later employed in America, whereby the bewildered natives were presented before the opening of hostilities with a formal document giving them the option of accepting Christianity and Spanish rule.

It could, however, be argued that there was a difference in kind between the Canary Islanders and the Moors of South Spain, since the islanders were totally ignorant of Christianity until the arrival of the Spaniards, whereas the Moors had heard of Christianity but rejected it. Slavery would surely seem an excessively harsh punishment for mere ignorance.

J.H. Elliott, *Imperial Spain,* 46-7, 58
In *1492: Discovery/Invasion/Encounter,* 9

Much later, in America, the long speech would be read in the middle of the night, without an interpreter, some distance away from the village that would be attacked in the morning, so that the sleeping natives never knew their "options" before the surprise massacre.

Expulsion of Heretics

The Inquisition had a monetary as well as a religious drive. Successful businessmen who also happened to be Jews were envied and distrusted. Many Jews converted to Christianity, to no avail, as the excesses of religious zeal were put to double use. Jews were denounced as heretics, they were arrested and expelled from the country, and their money was confiscated into the coffers of the state.

of land to conquer inside Spain, and the only avenue open was for the barons to go back to fighting each other.

Overseas Expansion

Ferdinand and Isabella came to power because they were able to consolidate the various factions during the long war against the Moors, but they had very little economic power. They looked with longing at the riches the Mediterranean nation-states gained from commerce. In addition to the need to refocus the war machine and the desire for riches, the traditional hostility between Spain and Portugal provided another incentive to acquire possessions overseas. Portugal had already settled the Azores and Madeira, far out in the Atlantic.

Following the lead of Portugal, the Spanish monarchs launched a successful attack against one of the Canary Islands and thereby began their experience with colonization. They then used the Canaries as a sort of laboratory for practicing the techniques later used in the "new world."

In its later stages, much of the reconquest was conducted under control of the crown with financial support from both public and private institutions. This pattern was further developed in the occupation of the Canaries in a contract between the state and a company of merchants from Seville. The combination of money from merchants and legal authority from the royal family provided a useful precedent for the later voyages of discovery. The Canaries would also be critically important as a staging point for the voyages themselves.

All of Columbus's expeditions were launched from the Canary archipelago.

Eventually, Portugal would concentrate its efforts on finding a way to Asia eastward around Africa; Spain, in the person of Christopher Columbus, would sail west.

The Church

During the first three centuries after the birth of Jesus, Christianity had no concern for the punishment of those who disagreed with its precepts. But gradually throughout Europe a notion took hold that the divinity of Jesus Christ was a doctrine that all human beings must believe in. Unlike many other cultures of the world which accept the reality of different belief systems, Christianity developed at its base a compulsive universality, the idea that "Christian truths were absolute and permitted no deviations among believers, nonbelievers, or peoples who had not yet encountered the faith" (Mohawk, 43).

From 1057 on, popes tried to unify all of Europe under their authority. In addition to the reconquest and the Crusades, the major military attempts to expel heretics from European-claimed territory, another device was instituted: the Inquisition, which all the European countries used in various forms to rid their lands of heresy.

The Spanish, after an initial hostility towards its excesses, gradually adopted and greatly refined the methods of the Inquisition. At first the primary targets were Moors and Jews, even those who had converted to Christianity *(conversos)*, who were held in general suspicion because of their wealth and power.

The Moors were conquered at Granada, but the victory had emptied the treasuries of the Spanish kingdoms. The power of the Church, never so great as when it stood with cross and sword over the fallen Moslem, had at that moment insisted upon the expulsion from the realms of every person professing the Jewish faith, and thus the country was deprived of a people not only possessing commercial riches but constant producers of national property, a people sober, dexterous, and thrifty.

John Boyd Thacher, *Christopher Columbus: His Life, His Work, His Remains*, 172

The country may have been deprived of productive citizens, as Thacher points out, but the treasuries benefited. Indeed, some of the confiscated wealth was used in funding later voyages of exploration.

Church Promotion of Violence

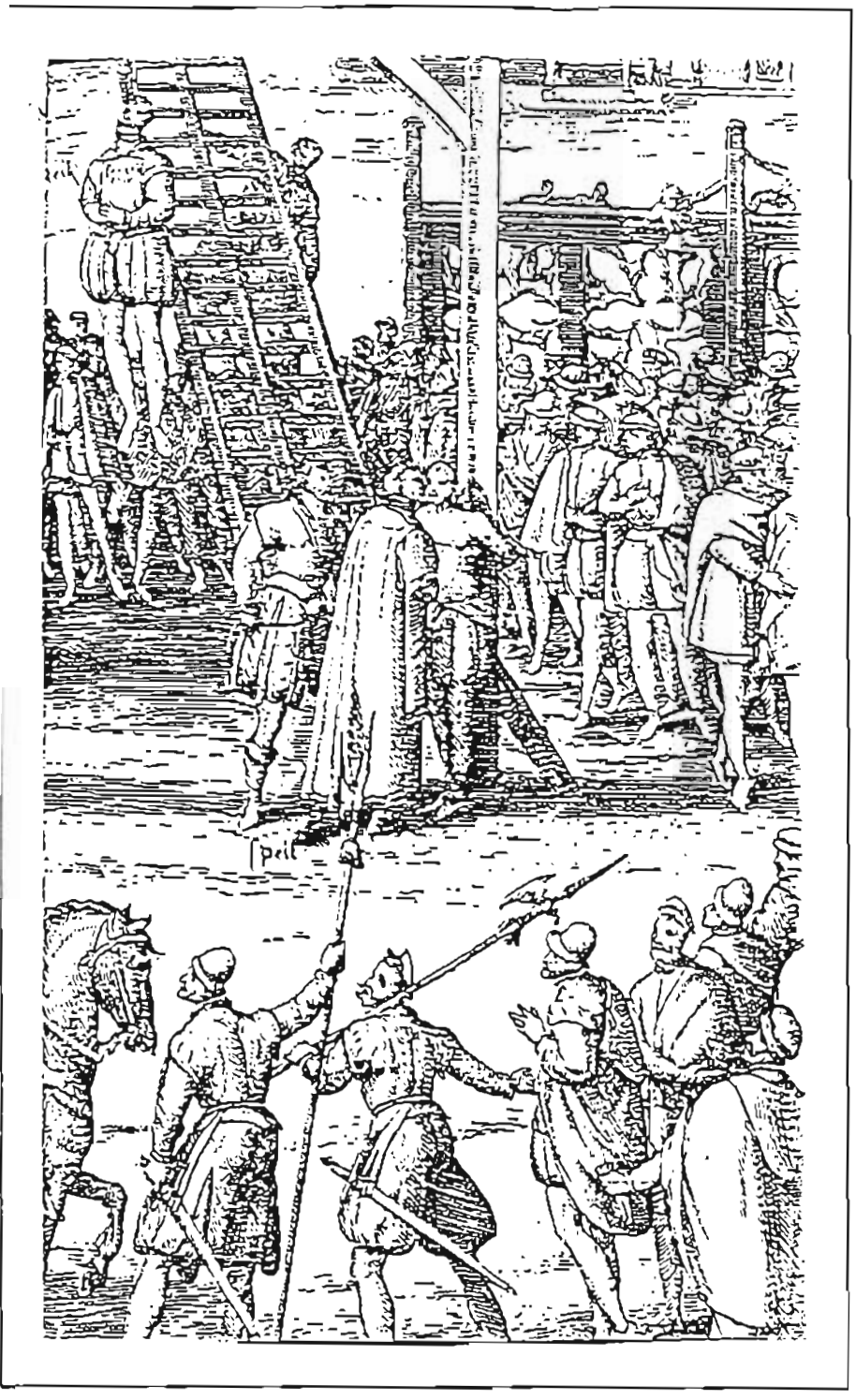
However, the message of the Inquisition was not just for Jews, or for Moors, but for everyone:

The church-sponsored violence known as the Inquisition . . . went, methodically and heartlessly, after any variety of heretic or dissenter, reformer or mystic, attempting to do by the sword—or by the torturer's rack and the auto-da-fé [public burning]—what it could not do by word or prayer, under whose jurisdiction countless millions were imprisoned, by whose decree countless hundreds of thousands were killed.

The Inquisition in Spain was the most brutal of all in the fifteenth century, in part because it was, uniquely, under the control of the crowns of Castile and Aragon. It was in fact the only truly national institution within their territory and as such their single most potent (and indeed most popular) instrument for creating the nation-state that was to be Spain.

The Inquisition, under royal direction from 1483, was the one whose strictures Cristobal Colon would have been careful to heed, and whose ministrations, evidenced in clouds of smoke billowing from town squares throughout the land, he would have witnessed daily.

Kirkpatrick Sale, *The Conquest of Paradise*, 33



Above illustration: A public execution

The Economics of Wool

The year 1492 marked a watershed for Spain. The conquest of Granada and the expulsion of the Jews had far-reaching consequences. Centuries of conflict came to an end; so did centuries of religious tolerance. Spain became a nation-state characterized by centralized autocratic government, a homogeneous population, and a theology that allowed for no deviation. It was also a nation-state badly in need of gold.

When heretics were convicted, by a separate court of the Inquisition, for statements, writings, or actions that didn't follow stringent church laws, they lost their property, their citizenship, and quite often their lives. The accused were presumed guilty; they were not told who had denounced them, and they were strongly persuaded to confess and denounce other "heretics." Torture, although originally unpopular in Spain, gradually became the main method of extracting confessions and was applied widely until the eighteenth century.

The Inquisition spread throughout the Spanish colonial empire hand in hand with the Catholic faith. Later, in Spain, as in the rest of Europe, it was directed against Protestants.

New Philosophies

To the violence and terror of the day, humanism provided answers. Humanists turned to the classics of antiquity, translating and disseminating ideas from Greek and Latin authors to help upper-class citizens find a sense of direction in their lives.

According to humanist philosophy, man is the crown of God's creation, constantly seeking dominion over the world, never satisfied as long as there are lands to conquer. Morality took the form of a secular pragmatism: what's important is what works in the here and now.

Humanism also fit into the prevailing class system. Although the term "man" was used to mean "human," it also had strong connotations

of "male human," especially male human of the upper class, the educated, wealthy, urban man of position.

Along with the glorification of the human went a dismissal and fear of nature. Fairy tales and poetry portrayed mountains, forests, jungles, and deserts as terrifying, populated with both real and mythical beasts. Anything wild was feared; man's duty was to tame the wilderness, to bring nature under his control. The early explorers shared with their culture a lack of appreciation of the beauties of the lands they were seeing for the first time; the notion that humans might live in harmony with nature was not a familiar one.

The idea of the Wild Man, a terrifying mythical being who lived in the hills and mountains, frightened both children and adults. In pictures and stories he was portrayed as naked, covered with hair, usually wielding a club, living like a wild beast and ready to do damage to more "civilized" Europeans. The concept of the Savage Beast later had disastrous consequences for the innocent natives who welcomed Columbus.

Another response to the chaos of the Middle Ages was rationalism, the philosophy that forms the basis for present-day scientific methodology. Gradually, over many decades, old worldviews were replaced. Centuries-old beliefs in gods and spirits that inhabited the elements of nature gave way to scientific proof that all combinations of chemical and mechanical properties could be measured and subjected to analysis, prediction, and manipulation.

The only way of getting that universally acceptable means of payment was through the export of wool, a crop produced in a context of extreme economic disparity and hardship.

Ferdinand and Isabella had used the long war against the Moors to strike down the political power of the noblemen, but not their economic power. The nobility, about two percent of the population, owned ninety-five percent of the land. The peasants were not serfs: they had the right to leave their fields. But that freedom has been called "the freedom to die of hunger." There was nowhere for them to go.

The sheep of Spain, some three million of them, belonged to the Mesta, the sheep raisers' corporation, which was really a state within the state. Every spring, these vast flocks of sheep were driven from the high plains of Castile to the mountains of Galicia and León for summer grazing. In the fall they were brought back. They had a guaranteed free passage. The sheep walks could not be enclosed by the peasants, who twice a year saw their land despoiled and their woods cut down by the Mesta shepherds.

The wool went to Flanders for gold, and the Mesta paid no one for the damage done to the land. No one but the King, who got tax monies, and the noble owners, who reaped profits, received anything back.

This, then, is a very brief sketch of the economics of Spain at the end of the fifteenth century: half-starving peasants and noblemen holding enormous estates: townships humbly obedient to an aggressive enormous monarchy and Church. The country was criss-crossed by millions of hungry sheep like a permanent plague of locusts. Wool was the national export but the wool trade brought in diminishing returns, and the damage to the land began causing repeated famines at home.

It was no wonder that envious eyes looked at the riches from commerce, and at the easy prosperity that the trade in spices and gold had brought to Venice, and was bringing to Portugal from its trading stations along the African coast.

The "Catholic Monarchs" felt they had a role to play in the world that could neither be financed by their miserable peasants nor by the Mesta alone. The stage was set for Columbus and the conquistadors who came after him.

Hans Koning, *Columbus: His Enterprise*, 17-18

Nature as the Enemy

The attitude toward nature of Europeans was very unusual.

This separation from the natural world, this estrangement from the realm of the wild, I think, exists in no other complex culture on earth. In its attitude to the wilderness, a heightening of its deep-seated antipathy to nature in general, European culture created a frightening distance between the human and the natural, between the deep silent rhythms of the world and the deep recurrent rhythms of the body, between the elemental eternal workings of the cosmos and the physical and psychological means of perception, by which we can come to understand it and our place within it.

To have regarded the wild as sacred, as do many other cultures around the world, would have been almost inconceivable in medieval Europe—and, if conceived, as some of those called witches found out, certainly heretical and punishable by the Inquisition.

Kirkpatrick Sale, *The Conquest of Paradise*, 78-79

The rise of mercantilism is the story of a struggle to retain and adapt an original Christian morality during the dynamic secularization of a religious outlook as an agrarian society was transformed into a life of commerce and industry.

William Appleman Williams, *The Contours of American History*, 33

Beginnings of Capitalism

What began as a new way to organize economic interaction, referred to as capitalism or mercantilism, had a profound impact on the next several centuries.

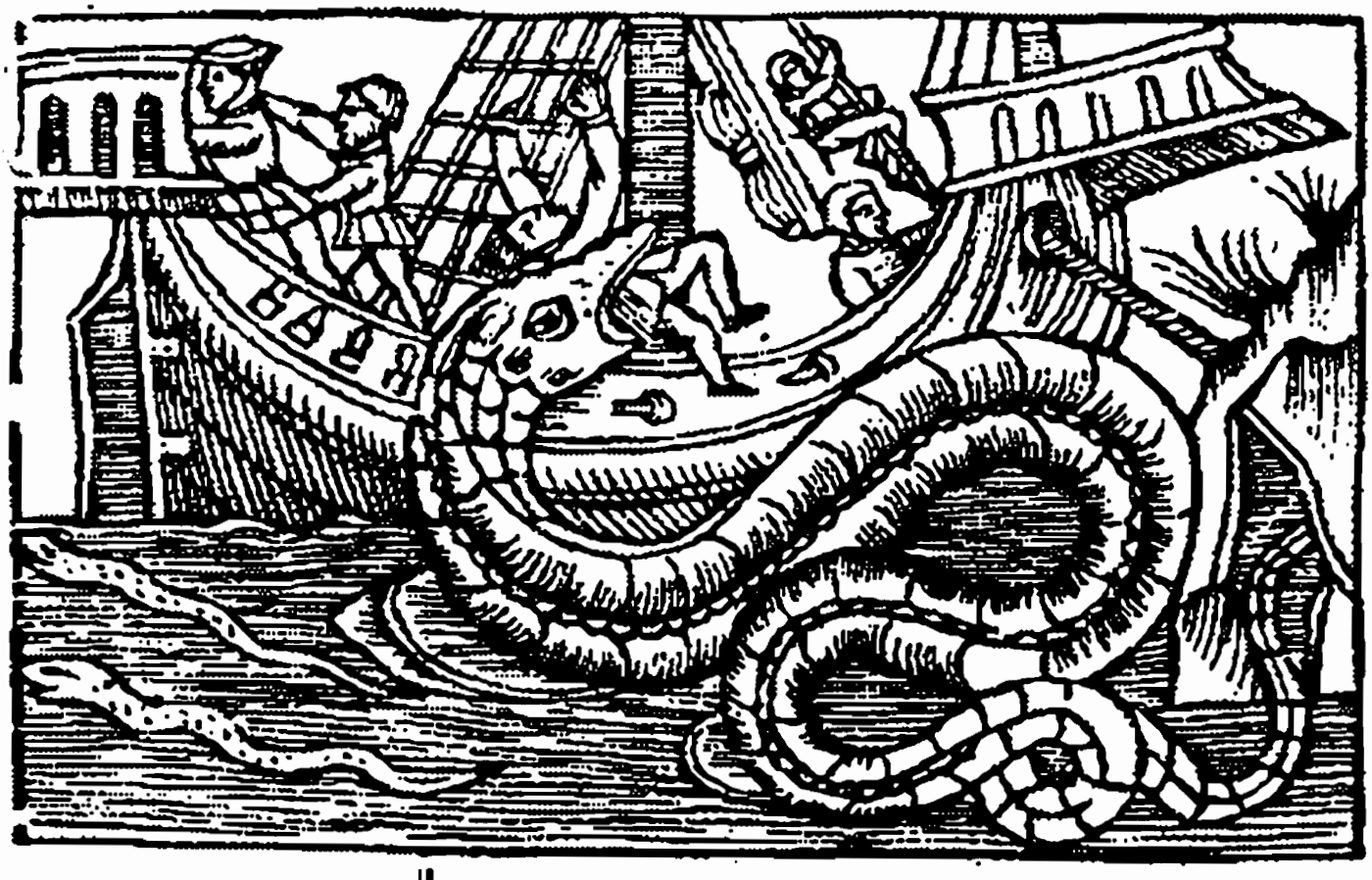
Having brought impoverishment to the domestic peasantry, especially in England, the land-owners and budding manufacturers were stimulated to promote overseas conquest and colonization. With their control of the state they could carry on such commercial activities under the guise of legality, international law and the law of states and conquest.

First the Spanish and Portuguese, and then the British, turned towards America, and the British annihilated whole societies in North America, in both cases rearranging the survivors under their control. The Dutch and French also penetrated North America and the Caribbean with the same motives, goals and results.

The advent of capitalist production brought fundamental changes in the structure of European society, and through colonialism, affected the entire world. Two new classes appeared wherever capitalism intervened: owners of the means of production, and dispossessed persons who were forced to sell their labour cheaply to those owners.

Scholars could point to new technological advances such as the printing press to bolster their claims for the validity and significance of rationalism. Printing extended knowledge to a wider audience than ever before. With the development of movable type in the 1440s and the availability of good, cheap paper, came a well-established printing industry by the 1470s. In a fifty-year period, from 1454 to 1504, twenty million books were printed in at least forty thousand separate editions. One of the most successful early books was the log of Columbus's first voyage, translated into four languages and printed in nineteen editions.

A natural adjunct of humanism and rationalism was materialism, the celebration of objects of the "real" world. Possession of material wealth became a primary goal of life and began to replace other values long honored because of ethical and religious considerations. Coveting goods was gradually accepted as tolerable human behavior, not criticized as sinful or immoral, and slowly a new form of economic interaction developed: capitalism. The church accompanied the shift in attitude. The Bible enjoins believers to promote the general welfare and common good of God's "corporate" world. Those words were simply applied to the new definition of God's world as the civil society in which individuals resided.



An artist's interpretation of the mystery of traveling through uncharted waters

Under capitalism, morality shifted. The purposes, needs, and limits of human beings no longer had a restraining influence upon industry; rather, the accumulation of money and power became the ultimate end for which human beings worked.

For the first time in human history, the majority of the people depended for their livelihood on a small minority, a phenomenon which became associated with colonialism worldwide.

Roxanne Dunbar Ortiz, *Indians of the Americas*, 10

Dangerous Voyages

Highly motivated men dared to undertake dangerous voyages to strange lands, willing to risk their lives on the high seas on perilous journeys, traveling farther than anyone had ever ventured before. A combination of circumstances in fifteenth-century Spain provided the incentives and the context: the violence, poverty, and disease common in the lives of the people; the rise of nationalism out of the hierarchical feudal system with its acceptance of the domination of one class over another; an impoverished nobility yearning for wealth; a recognition of the importance of material wealth and an awareness that other nations were getting it through commerce; and an insistance on the universality of the Christian culture, with a tradition of waging battles against heretics and a missionary spirit to "save the world."

"Maybe. But you'd be abandoning the control room."

"I can't do anything here anyway."

"God knows that's true," Malcolm said. "A control room without electricity is not much of a control room."

"All right," Muldoon said. "Let's try. This isn't looking good."

Lying in his bed, Malcolm said, "No, it's not looking good. It's looking like a disaster."

Wu said, "The raptors are going to follow us over there."

"We're still better off," Malcolm said. "Let's go."

The radio clicked off. Malcolm closed his eyes, and breathed slowly, marshaling his strength.

"Just relax," Ellie said. "Just take it easy."

"You know what we are really talking about here," Malcolm said. "All this attempt to control . . . We are talking about Western attitudes that are five hundred years old. They began at the time when Florence, Italy, was the most important city in the world. The basic idea of science—that there was a new way to look at reality, that it was objective, that it did not depend on your beliefs or your nationality, that it was *rational*—that idea was fresh and exciting back then. It offered promise and hope for the future, and it swept away the old medieval system, which was hundreds of years old. The medieval world of feudal politics and religious dogma and hateful superstitions fell before science. But, in truth, this was because the medieval world didn't really work any more. It didn't work economically, it didn't work intellectually, and it didn't fit the new world that was emerging."

Malcolm coughed.

"But now," he continued, "science is the belief system that is hundreds of years old. And, like the medieval system before it, science is starting not to fit the world any more. Science has attained so much power that its practical limits begin to be apparent. Largely through science, billions of us live in one small world, densely packed and intercommunicating. But science cannot help us decide what to do with that world, or how to live. Science can make a nuclear reactor, but it cannot tell us not to build it. Science can make pesticide, but cannot tell us not to use it. And our world starts to seem polluted in fundamental ways—air, and water, and land—because of ungovernable science." He sighed. "This much is obvious to everyone."

There was a silence. Malcolm lay with his eyes closed, his breathing labored. No one spoke, and it seemed to Ellie that Malcolm had finally fallen asleep. Then he sat up again, abruptly.

"At the same time, the great intellectual justification of science has vanished. Ever since Newton and Descartes, science has explicitly offered us the vision of total control. Science has claimed the power to eventually control everything, through its understanding of natural laws. But in the twentieth century, that claim has been shattered beyond repair. First, Heisenberg's uncertainty principle set limits on what we could know about the subatomic world. Oh well, we say. None of us lives in a subatomic world. It doesn't make any practical difference as we go through our lives. Then Gödel's theorem set similar limits to mathematics, the formal language of science. Mathematicians used to think that their language had some special inherent trueness that derived from the laws of logic. Now we know that what we call 'reason' is just an arbitrary game. It's not special, in the way we thought it was.

"And now chaos theory proves that unpredictability is built into our daily lives. It is as mundane as the rainstorm we cannot predict. And so the grand vision of science, hundreds of years old—the dream of total control—has died, in our century. And with it much of the justification, the rationale for science to do what it does. And for us to listen to it. Science has always said that it may not know everything now but it will know, eventually. But now we see that isn't true. It is an idle boast. As foolish, and as misguided, as the child who jumps off a building because he believes he can fly."

"This is very extreme," Hammond said, shaking his head.

"We are witnessing the end of the scientific era. Science, like other outmoded systems, is destroying itself. As it gains in power, it proves itself incapable of handling the power. Because things are going very fast now. Fifty years ago, everyone was gaga over the atomic bomb. That was power. No one could imagine anything more. Yet, a bare decade after the bomb, we began to have genetic power. And genetic power is far more potent than atomic power. And it will be in everyone's hands. It will be in kits for backyard gardeners. Experiments for schoolchildren. Cheap labs for terrorists and dictators. And that will force everyone to ask the same question—What should I do with my power?—which is the very question science says it cannot answer."

"So what will happen?" Ellie said.

Malcolm shrugged. "A change."

Chapter Two

Europe

I

"The End of the World Is Near"

IT WAS late in the year 1492 that the renowned Nuremberg printer Anton Koberger commissioned several leading German artists to create a series of some two thousand woodcuts for a massive *Book of Chronicles* being written by Hartmann Schedel, a physician, scholar, and man of letters, which he planned to publish the following year. One of the studios he selected employed a young Nuremberg artist, Albrecht Dürer, then just twenty-one years old but already recognized (not least by himself) as a man of genius.

Among the assignments apparently given to young Dürer was to produce a *Dance of Death*. This theme, a recurrent one ever since the terrible plagues that ravaged Europe in the fourteenth century and still unexpectedly, mysteriously, and devastatingly visited European cities throughout the fifteenth century, grew in popularity as the decades passed. It exemplified perfectly the preoccupation with morbidity at all levels of society—princes as well as peasants, for none was exempt—a preoccupation that came to be called at the time "the culture of death." Popular treatises offered lessons on *ars moriendi*, the art of dying; mystery plays and pageants in town squares and cathedrals featured endless deathbed scenes replete with hovering, fearsome black angels; high and popular art, spread in part by the new printing press, presented scenes of rotten corpses, writhing skeletons, decaying bodies eaten by wriggling worms, and everywhere the grinning, lascivious, triumphant smile of Death himself. The

Dance of Death, in which bodies in various stages of putrefaction cavorted in their last exercise on earth, was by now a ubiquitous sight, found in frescoes and engravings, stained-glass panels and funerary statues, from London to Naples; it was the perfect drone for the threnody that resounded through an age of which historian Johan Huizinga has written, "No other epoch has laid so much stress as the expiring Middle Ages on the thought of death."

But Dürer's version, as one might expect, rose far above the usual depiction of this grisly scene. Here is not only terror and melancholy but also a kind of sickly joy and morbid delight as three dancing skeletons, one with flesh still drooping and entrails hanging, prance wildly above a grave from which a fourth corpse emerges, hand upraised, to join the dance being played for them by the ghastly piper, cloaked in shrouds, who leads their final tune. With the skill for infinite detail for which he later became famous, Dürer made all too clear the obsession, the psychotic fascination, of that age, that culture, with incomprehensible and ever-present Death. "By far the most gruesome example of these works of art," the German scholar Paul Herrmann writes, "it is terrible to behold, and it is meant to be so."

It is, in truth, a fitting illustration for the volume for which it was planned, a history of the world that would announce, as many of the time already believed, that the present age, "in which iniquity and evil have increased to the highest pitch," is the penultimate age of humankind, to be followed, and in not too many years, by the Day of Judgment and the end of the world.

The end of the world: the idea was taken quite seriously by Europe of the late fifteenth century—not as a mere conceit, not as a metaphor or theological trope, but as a somber, terrifying prediction based solidly on the divine wisdom of biblical prophecy and the felt experience of daily life. The protean German historian Egon Friedell, who calls this period the "incubation" of the Modern Age, argues that "there was a general feeling of the world's end, which, expressed or unexpressed, conscious or unconscious, permeated and dominated the whole era." Or in the words of Joseph Grünpeck, the official historian to the Hapsburg emperor Frederick III, "When you perceive the miserable corruption of the whole of Christendom, of all praise

worthy customs, rules and laws, the wretchedness of all classes, the many pestilences, the changes in this epoch and all the strange happenings, you know that the End of the World is near. And the waters of affliction will flow over the whole of Christendom."

In such an atmosphere it is not surprising that so much of Christendom reacted with an explosion of messianic millenarianism—Armageddon at hand, the terrible words of St. John come true ("Woe, woe, woe, to the inhabiters of the earth"), the reign of the Antichrist, the triumph of the serpent "which is the Devil," a thousand years of misery. The British historian Norman Cohn has filled a long book with the evidence of this strange but obviously very prevalent strain of Christianity in the late Middle Ages, and the only conclusion one can reach after his elaborate recitation is that for countless hundreds of thousands of Europeans manifestly millenarian—Ranter or Thuringian, Amaurian or Taborite, Free Spirit or Franciscan—there must have been hundreds of thousands of others resonating with the same sensibilities.

Among whom—and "resonating" is the right word—was one Cristóbal Colón, lately of Palos and now embarked on his mad, brave adventure across the Ocean Sea. The end of the world was apparently an abiding, perhaps even obsessive, preoccupation of his, and he was concerned to determine exactly how many years remained until the Final Judgment. For this he pored over Revelations and Isaiah at length, but most important to him was Pierre d'Ailly's *Imago mundi* (complete with opuscula), in his copy of which he made no fewer than 848 marginal notes and calculations. His conclusion: "St. Augustine says that the end of the world will come in the seventh millennium from its creation; the holy theologians follow him, especially the Cardinal Pierre D'Ailly. . . . According to this calculation, there are lacking about one hundred and fifty-five years for the completion of the seven thousand, at which time the world will come to an end." In other words, Armageddon around 1650. And this he believed.

Whether the end of the world was understood to be as imminent as tomorrow or as distant as several generations off, the effect on the soul of Europe was pretty much the same. "A general feeling of impending calamity hangs over Europe," in the words of Huizinga, "a sombre melancholy weighs on people's souls." The evidence is everywhere: in the replicas of the Dance of Death, of course, in the immediately popular first edition of *Danse Macabré* in 1485, in the melancholy love songs of northern Europe, in the diaries of the young grandees of Spain, in the diatribes from Italian pulpits, in Georges Chastellain's chronicles of unlucky princes, in this typical stanza of the French poet Eustache Deschamps, one of his dozens of "monotonous and gloomy variations" on this theme:

Time of melancholy, and of temptation,
Age of tears, where envy and torment blend,
Time of lassitude and of condemnation,
Age of decadence before the end.
Time full of horror, deceiving all around,
Age of lies, with pride and envy rife,
Time without honor, nor sense nor judgment sound,
Age of sadness and the fore-doomed life.

And Huizinga, who devotes a substantial part of his classic *Waning of the Middle Ages* to this phenomenon, concludes, "Always and everywhere in the literature of the age, we find a confessed pessimism. As soon as the soul of these men has passed from childlike mirth and unreasoning enjoyment to reflection, deep dejection about all earthly misery takes their place and they see only the woe of life."

The woe of life. It is five centuries in the past for us, and a world without much that we now take for granted—without flat plates and table forks, and liquor and rubber and nightclothes and easy chairs and, important to remember, without the idea of progress or the optimism of the affluent—and so it is difficult even to imagine that sense of woe, much less feel it now. It thus deserves a closer look, a brief examination of at least a few of the darker landscapes of that age.

Violence What Huizinga calls "the violent tenor of life" in the fifteenth century was so pervasive—death was so daily, brutality so commonplace, destruction of the animate and inanimate so customary—that it is shocking even in our own age of mass destruction.

At the simplest level there was the violence of everyday life, suggested by this picture of fifteenth-century Spain by the contemporary historian Lucio Marineo Siculo:

> Many cities and towns of Spain cruelly worn out by many and most cruel thieves, murderers, adulterers, by infinite insults and sacrilege and all kind of delinquents . . . Some of them, scorning

laws both human and divine, took all justice into their own hands. Others, given to gluttony and laziness, shamelessly violated wives, virgins and nuns. . . . Others cruelly assaulted and robbed tradesmen, travelers and people on their way to fairs. Others, who had greater power and greater folly, seized lands and castles of the Crown, and sallying thence with violence robbed the fields of their neighbors.

At another level there was the sanctioned violence of local authorities whose punishments were meted out on a daily basis on the scaffolds of the public squares in almost every town and city. "Judicial cruelty," Huizinga calls it:

> Torture and executions are enjoyed by the spectators like an entertainment at a fair. The citizens of Mons [in Flanders] bought a brigand, at far too high a price, for the pleasure of seeing him quartered, "at which the people rejoiced more than if a new holy body had risen from the dead." The people of Bruges, in 1488 . . . cannot get their fill of seeing the tortures inflicted, on a high platform in the middle of the marketplace, on the magistrates suspected of treason. The unfortunates are refused the deathblow which they implore, that the people may feast again upon their torments.

On a higher level still, there was the Church-sponsored violence known as the Inquisition, which went, methodically and heartlessly, after any variety of heretic or dissenter, reformer or mystic, attempting to do by the sword—or by the torturer's rack and the auto-da-fé—what it could not do by word or prayer, under whose jurisdiction countless millions were imprisoned, by whose decree countless hundreds of thousands were killed. The Inquisition in Spain was the most brutal of all in the fifteenth century, in part because it was, uniquely, under the control of the crowns of Castile and Aragon. It was in fact the only truly national institution within their territory and as such their single most potent (and indeed most popular) instrument for creating the nation-state that was to be Spain. The Inquisition, under royal direction from 1483, was the one whose strictures Cristóbal Colón would have been careful to heed, and whose ministrations, evidenced in clouds of smoke billowing

from town squares throughout the land, he would have witnessed daily.

Then, finally, there is the violence of nation-states such as Spain, just then forming in Europe, and the principalities, duchies, margravates, republics, seigneuries, dominions, earldoms, and noble factions and royal families of all sorts, each one struggling to determine which should dominate in that formation and how wide its scope should be. To them, deadly violence was nothing less than the daily stuff of politics. Internally the savagery of brother against brother and cousin against cousin—complete with kidnapping, torture, mutilation, fratricide, patricide, assassination, and fomented rebellion—went on year after bloody year, as in the faction fights in the royal house of Scotland throughout the fifteenth century, the decades-long wars of White Rose and Red in England, and the crude battles between disputatious families in Castile, of which the contemporary historian Father Juan de Mariana wrote: "It was the custom of men to carry the title of kingship in the point of their lances and in their weapons," and "The strongest is the one who captures the jewel, and who wins it from his opponent without regard for the laws which are silent in the face of the clamor of arms, of trumpets and drums." When tired of that internecine pastime, the possessors of power would wield it just as brutally upon disobedient or disliked fellow citizens, as in the slaughters by the various tyrants struggling to rule the collapsing Italian city-states, the ruthless repression of sectarian and peasant revolts in the German provinces, the revival by Ferdinand and Isabella of the Santa Hermandad (Holy Brotherhood) as their private and lawless police force, and the vigilante-turned-terrorist VEHM in the Holy Roman Empire under Frederick III. And among each other the rising states would practice the same sort of relentless violence—officially called war—providing the fifteenth century with a steady spate of battle and siege and slaughter, whose reverberations touched every corner of the subcontinent and whose severity reached levels not merely double and triple but *ten and fifteen* times what they were just three centuries before.

Disease The devastation that was the Black Death had somewhat abated by the middle of the fifteenth century, but its resilient virus could and did surface for another three centuries in regions and localities all over Europe, and it is accurate to say that [illegible]

untouched by its deadly grip. Perugia, for example, was struck by plague at least eight times in the fifteenth century, with the loss of thousands; Hamburg, Nuremberg, and Cologne each had more than ten epidemics, with casualties sometimes of more than 50 percent, it is said; and Catalonia, which had been stricken by the plague four times in the fourteenth century, was hit another six times in the fifteenth, and its population of some 430,000 in 1365 had shrunk to less than 278,000 by 1497.

But the plague was only part of the daily—and always mysterious—fate of Europe. As one history of medicine puts it:

> During the Middle Ages, European humanity was plagued with epidemic diseases as never before or since, and these were variously attributed to comets and other astral influences, to storms, the failure of crops, famines, the sinking of mountains, the effects of drought or inundation, swarms of insects, poisoning of wells by Jews and other absurd causes. The real predisposing factors were the crowded condition and bad sanitation of the walled medieval towns, the squalor, misrule, and gross immorality occasioned by the many wars, by the fact that Europe was overrun with wandering soldiers, students and other vagabond characters, and by the general superstition, ignorance and uncleanliness of the masses.

And then it goes on to suggest the consequences: besides plagues, both bubonic and pulmonary (the latter, new to Europe in the fourteenth century, was especially devastating), leprosy, ergotism, scurvy, chorea, smallpox, measles, diphtheria, typhus, tuberculosis, and influenza, every one of which was not just debilitating but potentially deadly.

Deadly, and deadly on a scale, a daily scale even, that is difficult now to imagine. Listen to the rabble-rousing Savonarola, in 1496, intoning this image from his pulpit in Florence:

> There will not be enough men left to bury the dead; nor means to dig enough graves. So many will lie dead in the houses, that men will go through the streets crying, "Send forth your dead!" And the dead will be heaped in carts and on horses; they will be piled up and burnt. Men will pass through the streets crying aloud, "Are there any dead? Are there any dead?"

And that is not prophecy, really, nor rhetoric; it is clinical observation. Or more simply, Thomas à Kempis: "How can it even be called a life, which begets so many deaths and plagues?"

Famine It is not that food for the general populace was abundant or particularly nutritious at *any* time in the fifteenth century—wheat and barley were the staple, in most places the only, crops, and they provided little besides bread and soup—but that yields at all times were chancy and often meager. One year's bad harvest meant hunger; two, disaster. "Famine constantly visited the continent," Fernand Braudel notes soberly at the start of his masterly history of European society, "laying it waste and destroying lives." Nor, remember, were there the palliatives of potatoes and corn that saved the poor so often in later years: they were yet to be discovered in their native land, the New World.

Soils throughout Europe varied widely in quality, as did agricultural techniques, but even such a relatively privileged area as France experienced at least seven general, country-wide famines in the fifteenth century and innumerable local ones. As to the Mediterranean basin, marked by thin and none too fertile lands, it "was always on the verge of famine," Braudel notes, and Spain compounded its agricultural crisis by choosing sheep over tillage and allowing its *hidalgos* vast uncultivated holdings. Castile endured at least four serious general famines of which we have record in the fifteenth century, and a poor region such as Andalusia suffered from grain crises and famine with heartbreaking frequency: 1400–02, 1412–14, 1421, 1423–26, 1434–38, 1442–43, 1447–49, 1454, 1458–59, 1461–62, and 1465–73, for a total of thirty-five years. No wonder that an old Spanish proverb had it, "If the lark flies over Castile, she must take her grain of barley with her." No wonder that the word *carestía* recurs in the diaries and chronicles of the era: dearth, scarcity, want.

The tolls of such famines are largely unrecorded, folded into the count of death rates that were always high, and they most often accompanied epidemics of disasters anyway. One does get a sense, however, that many hundreds of thousands were victims of famine, one way or another, every year—even two centuries later, we know, as much as a third of the Finnish population died in the 1696 famine, and the electors of Burgundy in 1662 recorded that "famine this year has put an end to over ten thousand families in your province and forced a third of the inhabitants, even in the good towns, to eat wild

plants." From such details we may glimpse the situation at the close of the fifteenth century.

The social costs of recurrent famines were in any case high. Most often it was the countryside that felt the ravages first, and there that those who still had the strength took to open rebellion, of which we have some record if only because the official troops would be called out to put them down with force. But the severest famines touched the towns and cities, too, and the range of disruption there went from open robbing and looting and uncontrolled pillaging in suffering towns, to outright riots and rebellions, often again suppressed with nothing short of massacres. In Seville in 1462, one Garci Sánchez wrote: "At seven o'clock another hunger riot started in Seville. The mass of the people armed themselves and searched for bread. The gangs went from house to house searching for bread and saying that it had been stored away as a remedy for hard times. Everyone hid their valuables, thinking that they wished to loot their coffers. This lasted till mid-day." From the tone of it one is tempted to assume that such disturbances were hardly uncommon.

A somber age, then, and little wonder its preoccupation with death, little wonder its sense of impending doom. Famine, disease, violence, these the companions of the day, the season, the year, the lifetime however short. A French poet at the end of the fifteenth century left this anguished prayer:

> *War we suffer, famine, too, and death;*
> *Cold, heat, day, night, sap our breath;*
> *Fleas, scabmites, and vermin show their wrath*
> *Upon us daily. In short, have mercy, Lord,*
> *Upon us wicked persons, whose life is short.*

In the face of all of this, the institutions of the time knew no answers, no palliatives. The once stable customs and values of the medieval world no longer held; everywhere, as Friedell puts it, there was

> the definite, though generally unconscious rejection of all earlier dominants of existence. There is a sudden collapse of all the standards and "truths"—religious, ethical, philosophical, economical, erotic, and artistic—which, till then firmly established and believed, had guaranteed, seemingly forever, the orientation of man in past, present, and future. [It was] a catastrophic collapse of all values . . . a radical loosening of all bonds.

In place of the old universals there were now dualities, schisms, multiplicities, infinitudes: not for nothing is this the age that invents polyphony and counterpoint in music and double-entry bookkeeping in commerce, that knew such a babel of vernacular languages that Leonardo da Vinci at the time feared "the generation of man will come to pass as not to understand each other's speech."

"This was a civilization that had lost its bearings," say Bruce and William Catton in their survey of the era, and the evidence of that is everywhere: what authority, after all, could make sense of these times, these long decades of upheaval and despair? What was there to trust in an era of uncertainty, how find peace when there was violence all around, where look for harbor when the winds brought only tempests?

The Church? Corrupt and decadent, without authority or comfort, and quite unable to predict or explain or even to assuage the catastrophies that befell on every side; the Inquisition, we should remember, was a sign not of strength but of weakness, not of fervor but of rot. "No man in these days builds churches or founds monasteries," reported Abbot Trithemius of Sponheim, accurately, in 1493.

The prince, the seigneur? Generally, without concern; if concerned, without compassion; if compassioned, without power to aid and heal. "A prince," after all, as Machiavelli wrote just a few years hence, "cannot do all the things for which men are esteemed good, for, in order to maintain the state, he is often obliged to act contrary to humanity, contrary to charity, contrary to religion."

The state, then? It was there, and growing, but so far little more than the fledgling construct of this or that temporarily more powerful lord, concerned more with higher taxes and usurpations of power than with anything like the solace and security that, at least in theory, nations would come to provide their citizens. The lot of most people, as Nicholas of Cusa put it, was "to live . . . subject to servility and umbrage to those who rule them," with few defenses against that arbitrary authority, and of rights and comforts almost none at all.

To what, then, could a bewildered and despondent Europe turn? As it happened—but of course it was not so happenstantial as all

that—there were three responses open to a battered Europe at that time, responses that were shaped by powerful social and intellectual forces still early in their development but with such inherent strength that they would come to mark, and would go on to sustain, the Modern Age right to the present.

There was, first, that response of the Renaissance, primarily on the Italian peninsula but soon throughout the entire (at least the educated) subcontinent, that goes by the name of *humanism*. In an age of lost certainties and ebbing faith, it proffered what might be seen as the most tangible, the most fundamental, object of all, and endowed it with both corporeal virtue and a kind of divine uniqueness. Humanism swept through fifteenth-century Europe not merely because it created an effective substructure for the classes of wealth and power, but because it provided a flood of answers, and with the authority of antiquity, to fill the gaping holes of doubt and disbelief for all.

De dignitate et excellentia hominis was the title of Giannozzo Manetti's influential book, published in the 1440s, and therein was the simple message of the humanistic vision. In the face of that dignity and excellence, given its full range, all of the era's obstacles—political, intellectual, practical—would surely crumble, as the Florentine humanist Marsilio Ficino made clear in his *Theologica platonica*, published in the early 1480s: "The immense magnificence of our soul may manifestly be seen from this: man will not be satisfied with the empire of this world, if, having conquered this one, he learns that there remains another world which he has not yet subjugated. . . . Thus man wishes no superior and no equal and will not permit anything to be left out and excluded from his rule." This is not merely the classical "man the measure." This is a new, unrestrained "man the imperialist," and how fitting a description it is of the age on which Europe was to embark—and how apt, we may conjecture, it must have seemed to at least one former Genoese.

But humanism does not, in its philosophical excesses, stop there: next is nothing less than "man the divine." Ficino put it simply: "And so he strives to be as God everywhere." No blasphemy there, no sacrilege, for it is merely the recognition of what was truly in God's plan, the elevation of the human above all species. Leon Battista Alberti, a Renaissance man par excellence, expresses it in this paean to man: "To you is given a body more graceful than other animals,

to you power of apt and various movements, to you most sharp and delicate senses, to you wit, reason, memory, like an immortal god." And for another Florentine, Giovanni Pico della Mirandola, the possibility for every human was nothing less than "to regenerate thyself a godlike being." A Renaissance it was indeed: a rebirth of the human in the image of God.

Not that humanism sought to put forth a new *morality* in place of a Christian creed shredded by a century and more of cynicism and scurrility; not at all. It promoted rather a new secular pragmatism that overrode the old questions of morality, and Machiavelli, although he shocked even some of his compatriots with his blunt assertions of it, was merely its most open acolyte. What works, in the here and now, for this society of humans, at this time, is what matters: after all, we are building not the Heavenly City but the earthly one. The modern historian Lauro Martines, in his study of Renaissance Italy, points out that all along humanism was meant "to provide upper-class citizens with a sense of unity and direction in their lives. And this was a consciousness oriented more frankly toward worldly ends. Sin would have to be de-emphasized and morality redefined [toward] a psychological consciousness that was more in keeping with worldly goals." Hence, by the fifteenth century, "the demands of worldliness were taken in, absorbed, and became the psychological consciousness not only of literati but also of the social groups at the top." Hence also—and the linkage is neat—both "money and authority had no more able and wheedling defense than that found in humanist encomia."

When humanism spoke of the "dignity of man," one should note, it meant primarily "man" in the broader sense of "human." But it *also* meant the male human, and especially the wealthy, urban, positioned, accomplished male; most assuredly it did not include, except in the most casual way, woman. For this was a Europe in which patriarchy was deeply ingrained: the patriarchy of the Church, with an infallible father at its top, of the principality and the state, with their hierarchical forms of dominance, of the very family itself, with the male in both legal and ecclesiastical eyes the reigning power in the home. In the chain of being, it was understood that the biological entity that came just below man was woman.

A second, closely related response of that era was *rationalism*, particularly that form of it which now goes by the name of science

It was a decidedly anomalous way of looking at the world, but European rationalism—that promulgation of logical, straight-line, objective comprehension which finds its apex in the scientific method—proved to be the ideal instrument for the time and place. With it philosophers and scholars, and very soon all educated people, could provide a picture of the world in its smallest detail that quite did away with any need to suppose a God, or gods, or miracles or magic or mysticism or metaphysics. Let the old religions falter and fail; science would be the new faith.

The task of achieving this triumph of European rationalism was immense, and it took a whole range of disparate talents—humanists, artisans, painters, surgeons, alchemists—and decades before it was ascendant, centuries before it was commonplace. For there were age-old habits of thought to dispel, fundamentally different modes of perception to supplant. "What they had to do was not criticize and combat faulty theories," a modern scholar of the early scientists has written, "they had to do something different. They had to replace the framework of the intellect itself, to restate and reform its concepts, to evolve a new approach to Being, a new concept of knowledge, a new concept of science, and even to replace a pretty natural approach, that of common sense, by another which is not natural at all." It was like trying to say that cannonballs and feathers fall at the same speed.

What they had to achieve, in short, was—in Schiller's later masterful phrase—the "de-godding of nature." At the time, even with the best efforts of the Church, there still lingered in many places in Europe the common wisdom that gods and spirits inhabited the elements of nature—trees, certainly, streams and rivers, forests, rocks—or in some parts of the Church itself, that nature was sacred because God was immanent in all that He created. The task of rationalism, through science, was to show—no, better, to *prove*—that there was no sanctity about these aspects of nature, that they were not animate or purposeful or sensate, but rather nothing more than measurable combinations of chemical and mechanical properties, subject to scientific analysis, prediction, and manipulation. Being de-godded, they could thereby be capable of human use and control according to human whim and desire, and Europeans—uniquely, as near as we can tell, among all cultures—could assume, in Descartes's words, that humans were the "masters and possessors of nature."

One reason that the new rationalism gained such credence in Europe at this time was that, in a manner of speaking, it came up with the goods. The technologies it spawned, and the ones accepted and implemented by the political and commercial powers of the era, were there to be seen and marveled at, very soon a part of everyday life: the public clock, for example (which now at the end of the fifteenth century first began to strike at the quarter hour), and eyeglasses (which came into general use only at the middle of the century), and pane-glass windows (increasingly common, especially in houses of the rich), and the double-rigged three-masted sailing ship (common in both northern and southern Europe by the last part of the century). But none was more significant, in immediate impact as well as in subsequent durability, than—there is dark irony in their conjunction, so typical of objective rationalism—the printing press and the gun.

The perfection of movable type in the 1440s and the availability of good, cheap paper to replace expensive parchment created a printing industry in Europe that was widespread and well-established by the 1470s; by 1500, it is said, there were 110 places on the subcontinent, from Toledo to Stockholm, with at least one printing press and some with three or four. Within the comparatively short period of half a century—from 1454 to 1501, known to scholars as the Age of Incunabula (which marvelous word actually means "swaddling clothes")—there were, by one estimate, 20 million books printed, in at least 40,000 separate editions. And while one could hardly gainsay the positive effects of such an explosion, it is fair nonetheless to point out that something may have started to be lost in the substitution of the machine for the human, the impersonal for the individualistic, quantity for quality, uniformity for spontaneity: it was the beginning, it is not too much to say, of the industrialization of philosophy and the mechanization of thought.

The century's other triumphant technology (in many respects, from metallurgy to specialization, a related one) was that of armaments, made possible by the development of "corned" gunpowder from the 1420s and more sophisticated gun bores and firing mechanisms from the 1460s. With the invention of the arquebus sometime in the later part of the century, allowing individual soldiers to have powder-fired weapons, and then with the perfection of mobile and large-bore cannon in the 1480s (proven by the French in the field in 1494), allowing a fairly small army to have devastating and mobile firepower, the basics of modern mechanized warfare [illegible]

of the fifteenth century," two economic historians write, "when both cannon and small arms were in common use, gunpowder had profoundly altered the military, governmental, and industrial aspects of medieval civilization." Profoundly altered, indeed: one might more accurately say that it very quickly destroyed it entirely.

But one further consequence of the rise of a rationalistic science goes beyond the technological achievements, as great as those are. It is what we may call the culture of science, the bed from which it grows and which it in turn fertilizes: a milieu of restlessness, curiosity, movement, impatience, and zeal; of the need to explain and explore and overturn and unveil as no other society seems to have felt before. Peter Mathias, a British historian of science who deals with this phenomenon, notes that it is the spread not of scientific *knowledge*, which is truly possessed by only a few, but of scientific *attitudes*, which are absorbed by many, that characterizes Europe from the fifteenth century on. Science and technology in this context, he notes, "give evidence of a society increasingly curious, increasingly questing, increasingly on the move, on the make, having a go, increasingly seeking to experiment, wanting to improve." It is heroic and Promethean, perhaps, but it is also dangerous and Faustian, and Friedell may not be off the mark in calling it a "daemonic emotion."

A final response of the fifteenth century to its bewildering circumstances was, naturally, of a piece with the first two: *materialism* and, in its everyday economic guise, capitalism. The impulse to treasure the material here-and-now, the tangible, in a world of both corporeal uncertainty and spiritual vacuity would seem to be perfectly normal, as we see it today, and yet it appears to have been something quite new for Europe, at least in the frank and far-reaching way it was now expressed. The touched and seen, the rationalistically "real" and the scientifically quantifiable, slowly take on an importance that they had had at no other time and place.

We see it best probably in the art of the age: in the love of objects in precise detail that obsesses Dürer, for example, or especially Leonardo, as his notebooks endlessly attest; in the almost palpable look of material things in a van Eyck portrait; in the elaborate complexities that fill those Bosch paintings to the bursting point. The artists of the time, in the words of Kenneth Clark, "had, to a supreme degree, the power of making their thoughts visible," giving to their works what he calls an "atmosphere of liberal materialism." That materialism

celebrated the objects of the outward world, made "realistic" now through perspective, anatomy, foreshortening, all the skills of the Renaissance trade, in a style that stands in stark contrast to virtually all of the art of the preceding centuries since the fall of Rome. The realism of the age was materialism in paint and marble.

Not that this was the first era in which the human soul coveted and strove for wealth—but perhaps the first in which the possession of material goods began so markedly to replace other values at the center of ethical and religious pantheons. All of the trappings and rigamarole that other societies in other eras had used to deflect, disguise, deflate, or deny their love of material wealth were here, in a forthright and practical Europe, gradually dispensed with. Where else would we likely find a man like the great printer Aldus Manutius placing above the door of his shop, the soon-to-be-famous Aldine Press in Venice (and at about the time of the First Voyage), a sign reading: "Talk of nothing but business, and despatch that business quickly"? Where else would we find the hero of a hortatory dialogue saying, as does a character in an Alberti piece, "A man cannot set his hand to more liberal [beneficial] work than making money"? Where else would we find eulogies, such as those for Matteo Palmieri, who died in Florence in 1475, praising a man for knowing "how much riches contribute to a civic life led with dignity"? This is a frankness of material lust one encounters rarely in the historical record.

This straightforward materialism, developed over long decades with sophisticated humanism and rationalism as its companions, created the essential conditions for the success of that economic system we have come to call capitalism. (The word itself was unknown in the fifteenth century, of course—it doesn't exist until the eighteenth, doesn't take on its present meaning until the late nineteenth.) Other contributory elements, to be sure, had also come into being by the late fifteenth century—credit lines, currency transfers, bills of exchange, maritime insurance, international banking, and the accumulation of metals and moneys themselves—but it was materialism's pattern of mind, its order of values, its reinterpretation of the world, that really permitted all these other instruments to develop in Europe, and mesh, and flourish.

The process was naturally a long one, starting well before the fifteenth century and continuing after, but in that century one clearly

sees the beginnings of its triumph, and even contemporaries started to sense the undermining of the old values and the emplacement of the new. The idea of a "just price," which so dominated medieval economics that guilds would ostracize those who tried to charge more than the set figure for their goods, now gave way to the concept of "what the traffic will bear"; earlier notions of "good goods at a fair price" were displaced by a revival of the old Roman motto "Let the buyer beware"; the practice of usury, once regarded as a sin ("Thou shalt not lend upon usury to thy brother"), was first allowed to be the province of Jews ("Jews are as necessary as bakers," a Venetian reported in 1519) and then became the territory of any element of society. God, in short, and the restraints which He was presumed to have placed on the medieval economy, lost out to Mammon in this new unbridled form; and the Church had not the power (or, in truth, given its quite extensive worldly interests, the desire) to do anything about it. Lewis Mumford, in *The Condition of Man*, encapsulates it thus: "The whole moral change that took place under capitalism can be summed up in the fact that human purposes, human needs, and human limits no longer exercised a directive and restraining influence upon industry: people worked, not to maintain life, but to increase money and power and to minister to the ego that found satisfaction in vast accumulations of money and power." We should be careful to watch such a process.

Whatever one can say about these new forces to which the mind, the very culture, of Europe was turning—or to which it was succumbing, it might be better said—they were unquestionably powerful, proficient, and persuasive, and they would prove to be the essential skeletonic structure of the Modern Age. Indeed, as they developed not only independently but, even more, synergistically, they may be said to have created the very body and substance of that age.

And they were all nurtured by, and in turn nurtured, one last element of the age rather slower to develop, although its beginnings were visible now: the accretion of civic power we call the nation-state. The idea of the nation, much less the concept of nationalism, was so far insufficiently developed to provide an alternative allegiance for this age of bewilderment and despair. But the essentials were there, and it was only a matter of time before they were melded into a significant new political instrument, one that found itself in harmony with the pragmatic, accumulative, mechanistic, and essentially amoral strains I have mentioned. The new humanists and scientists and capitalists proved to be natural allies of the princes of this incipient state—and those princes who understood this soonest, and learned to use these alliances, won the day in the decades to come, and took unto themselves and their houses the elements not just of royalty, which is something ancient, but far more important, of nationhood, which is something new.

Nationalism was a potent instrument, indeed. It would have been so if it depended on nothing more than the moneylending of bankers and the large-bore artillery of armies, as in large part the government of the Spanish nation-state did for its century-long ascendancy. How much more potent when it could add the ancient wisdom and imaginative self-glorification of the humanists, the practical technics and manipulations of the scientists, the treasures and leverage of the capitalists; and more potent still when it found in this mesh of values all that justified and enshrined its growth and ultimate consolidation.

There is much that can be said about this extraordinary process of European state-building, but it suffices for now to know that it was a new phenomenon on the political horizon—just as a new continent appeared on the geographic one—and that it represented a configuration of power never before known, whose consequences would be spread as far as its representatives explored and settled. To Arnold Toynbee—and this in the fullness of age, not in his youthful *Study of History*—the rise of the nation-state was the crucial phenomenon of this era: "The major political change in Western Christendom in the course of the quarter of a millennium 1303–1563 was the transfer of power and revenue from the Papacy, and from other organs of the Western Church (e.g. monasteries), to local secular governments."

Thus we may begin to see the broader dimensions of the culture of Europe as it existed on that morning when Cristóbal Colón set sail and began the process that was to implant that culture not only in the two continents of the New World he was to find but in the islands and shores beyond them, around the globe. For the next five centuries, through a long process of aggrandizement and absorption, this culture came to prevail throughout virtually all the earth and in

those countries where it secured itself more or less intact, particularly in North America, as in those countries where it imposed itself by imperialism and industrialism, its priorities and visions, its preconceptions and powers, pretty much determined the fate of the earth.

It may be too much to see this, as for example Friedell does, as five hundred years of "that long unbroken Crisis of the European soul" expressing "one of the most rudimentary, childish, and primitive periods in the history of the human spirit"; or as the scholar Frederick Turner has put it, the method by which "a world millions of years in the making vanished into the voracious, insatiable maw of an alien civilization." Perhaps it is best to see it simply, in the words of the contemporary Spanish humanist Hernán Pérez de Oliva, as the means by which Spain would "unite the world and give to those strange lands the form of our own." But it was in any case a process by which Europe was able, eventually, to overcome its own desperate frailties and terrors, and find not only gold and silver and precious ores beyond imagining, not only foods that would sustain its population for centuries (potatoes, manioc, corn, tomatoes, among others), not only drugs it would take into its pharmacopoeia (some two hundred at various times), not only vast resources of timber and furs and hides and water power, but the huge continent on which the people of Europe would spread themselves and their culture.

In the dark twilight of fifteenth-century Europe, the overriding question, for those still able to ask questions at all, was how to survive the misery and suffering and violence that seemed to be rushing the world to its end. The answer that came, that was on its way to being born as the little fleet headed due west from the Canaries, was the conquest of Paradise.

Chapter Three

1492

II

Sunday, 9 September. He made that day 15 leagues. . . . In the night they made a hundred and twenty miles at ten miles per hour, which is 30 leagues. . . .

Monday, 10 September. On that day and night they made sixty leagues. . . .

Tuesday, 11 September. That day they sailed on their course, which was west, and they made 20 leagues and more. . . . That night they made nearly twenty leagues. . . .

For the first ten days at sea after their departure from the Canaries, the three small vessels under the command of Cristóbal Colón scudded before brisk trade winds into the waters of the Ocean Sea where no ship had ever gone before. All was uneventful, at least in the sense that delights the seaman: the ships were under full sail, making remarkably good distances of 150 miles or more a day, and though the sea was up, it was on the stern and the skies were clear and the weather balmy without hint of storms. In another sense, of course, each day brought the excitement of new waters and new experiences, a world of new birds and fish and vegetation and trade-wind clouds, and with each day the distance from home, and the anxiety, stretched farther.

The winds full, the miles swift: they may not have known where they were headed, but they were getting there awfully fast. (Unusually fast, in fact: the Captain General was lucky to have the trade winds following him still, since in normal years they slacken off in the latitudes he pursued.) But here is a strange thing. The Captain

Chapter Four

Europe

II

"The Earth Shall Quake Before Them"

"THE land is as the garden of Eden before them, and behind them a desolate wilderness; yea, and nothing shall escape them.

"The appearance of them is as the appearance of horses; and as horsemen, so shall they run.

"Before their face the people shall be much pained; all faces shall gather blackness.

"The earth shall quake before them; the heavens shall tremble."

Thus the prophet Joel.

That this island was an intimation of Paradise probably occurred to Colón, as no doubt to his shipmates, and in years to come the suggestion would harden into a certainty, at least in the Admiral's case. That they had left behind them a "desolate wilderness" would be more than any of them would say, even those who had come from the spare scrub-brown hills and harsh sandy soils of the Andalusian coasts and knew the meager and uncertain harvests they bore. And yet there is a sense in which "desolate" was hardly an exaggeration, and not by comparison only: behind them lay a Europe that in thought and deed was estranged from its natural environment and had for several thousand years been engaged in depleting and destroying the lands and waters it depended on, and justifying that with one or another creed or conviction.

When Colón set foot on his landfall island he brought this ecological heritage with him, of course, and in ways of which he would have had no understanding, of course. It was as certainly a part of his cargo as his lombards, as inevitably one of the possessions of a fifteenth-century European as the Bible and the sword—and ultimately deadlier.

The vastness and richness and beauty and variety of nature in the Americas came to have an immense effect on Europe's environmental sensibilities in the centuries ahead—an *eastward* impact, as it were—if only because it opened up more than eight times the space of Europe itself and introduced a thousand important species of biota that Europe had never known before. But at this point more important was the ecological character and history of Europe and the lessons from that heritage that were brought to these new lands—the *westward* impact, so to speak—because it wasn't so much that Europe *discovered* America as that it *incorporated* it and made it part of its own special, long-held and recently ratified, view of nature.

The tapestry that was Europe's view of nature was made up of many strands, those strands of many threads and weaves, and their patterns complex and various and not always beautiful. It is a subject whose literature is vast indeed, for the relation of humans to their surroundings has been a preoccupation of societies since the earliest, and the discourses in this genre in the last few decades alone make up an impressive library by themselves. But it is possible to draw out the broader themes of that literature, to see the most pronounced designs of that tapestry, and thus to get some notion of the ideas and attitudes that made up the ecological consciousness of fifteenth-century Europe.

We must begin, alas, with Europe's fear of most of the elements of the natural world—a fear based, as it always is, on simple ignorance, a benightedness among the learned sectors of Europe as well as the illiterate majority, that is shocking indeed as we look at it today.

The Church offered no encouragement for any investigation into the foreordained ways of God's creatures, much less the established workings of His trees and rivers and soils, and it was sufficient for most people to know that God created them, blessed them, and then

gave humans "dominion over" them.[1] Common lore, as we know it from the bestiaries and herbals of the time—which, being extremely popular, have come down to us in a large number of manuscripts as well as printed editions—was not much better, filled with either mundane and stereotypical views (lambs are meek, lions brave, wolves crafty) or fanciful and erroneous ones (toads suck cows' milk at night, woodpeckers are dangerous predators, beech trees deflect lightning, crushed rosemary leaves tied to the right arm "shall make thee light and merry"). Medieval poetry was not more sophisticated, treating the natural world with arch and ritual formulas by which "soft zephyrs" from the "dark woods" are always wafting over "murmuring waters," and one is certain to find passion in winds, love in roses, pity in streams, anger in storms, and violence in the ocean. All this platitude and misinformation about the real world was glued together with nonsense about the monstrous and fantastic world, and held to with the same level of credulity by even the most inquiring minds of the day: Laurence Andrew's very popular bestiary *The Noble Life & Natures of Man, of Beasts, Serpents, Fowls & Fishes That Be Most Known*, for example, the first printed work on animals in the English language, lists with equal credulence 144 known animals, 8 entirely unknown, and 21 strictly mythological.

It is hardly surprising that the European mind, mired thus, should fear what it did not comprehend and hate what it knew as fearful. Nature in the broad—its storms and floods, its harsh seasons and pestilences and famines—as well as in the particular—its rodents and roaches, its wolves and werewolves—represented for most people an antagonistic, oppositional world. The familiar was daunting enough, but the unusual and the distant and the unknown were scarier still, at times nothing less than terrifying, as we know from the fairy tales of the era, and this was particularly true of those places that remained the most remote: the mountains and the forests of the wilderness. As Lucretius had taught in his classic *De rerum natura*, earth "is filled full of restless dread throughout her woods, her mighty mountains and deep forests."

Mountains were places of dread. They were "regarded as physically unattractive" and "distasteful," as Keith Thomas points out in his illuminating study of European responses to nature, and "early modern travellers usually found mountainous country unpleasant and dangerous," likely as not to be "the home of uncivilized people."

Look at the depiction of mountains in all medieval and most Renaissance paintings: they are not the serene and majestic substantialities of beauty they were to become for the Romantics and in general are for us; they are distorted and jagged crags and precipices, diabolic, almost alive, dark and always barren but for a twisted tree or two, home only to fierce and wild creatures. Leonardo probably knew more about real mountains than any man of his century, and actually visited the Alps to study them, and yet in his *Madonna of the Rocks*—which he finished, incidentally, just two years before Colón stepped ashore in the New World—the bizarre monoliths of the grotto are scraggy and bare and somehow eerie, the mountainous shapes of the background like some unreal part of a forbidden desert: we are made to feel the stark, frisson-of-fear contrast with the beatific family group in the foreground. "Hideous" is the word that comes to mind, and indeed that is the adjective more than any other that characterizes the descriptions of such landscapes, over and over again: "hideous," says Thomas More about the wild Zapoletes who live in the mountains east of his Utopia; "hideous," says William Cambden about the "craggy mountains" of Wales; "hideous," says Chief Justice Roger North about the hills of northern England; "hideous," says James Howell about the Alps.*

Forests were worse. To be sure, actual mammals of some fierceness dwelled there, particularly in the heavily wooded areas of northern Europe; Marc Bloch in *Feudal Society* remarks that "wild animals that now only haunt our nursery tales—bears and, above all, wolves—prowled in every wilderness, and even amongst cultivated fields." No doubt also human outcasts and squatters and hermits of some unpleasantness inhabited the forests, as well as various criminals, outlaws, and bandits of the kind that the Robin Hood legends grew up about. But the imagination, of the adult as well as the child, made of the forest a place of many more fantastic terrors and dangers than those: it became the home of satyrs and centaurs (it is from the name

*It is often remarked that Petrarch climbed a mountain in the early fourteenth century and found it an experience of great pleasure. It is less often noted that he seems to have been the first person to have felt that way about a mountain at least since the early Greeks. It is almost never added that he immediately felt guilty for feeling pleasure and by some happenstance turned to that passage in his pocket St. Augustine that told him he should be ashamed "for not ceasing to admire things of earth" instead of the human soul. He learned his lesson. "As I descended, I gazed back, and the lofty summit of the mountain seemed to me scarcely a cubit high, compared with the sublime dignity of man."

of Pan, god of the satyrs, that we get the word "panic"); of devil-spawned monsters and hell-creatures (e.g., dog-heads, cyclopes, dragons) that abduct women and devour children; of whole races of accursed near-human peoples who are animalistic and savage (it is from *silva*, Latin for "woods," that we derive the word "savage"); and of the figure that recurs more than any other in medieval lore, the Wild Man—a huge, powerful, hairy figure, carrying a wooden club, with large genitals exposed, draped with strands of rank foliage, mute and therefore without reason, possessed of the secrets of nature, slave to natural desires and passions uncontrolled, always lurking there, over there, in the arboreal darkness—and as well in the dark, repressed corners of human desire and anxiety and fear.

But forests and mountains—and with them deserts, jungles, even islands—need not be populated to be fearsome. It was enough that these places were wild: *that* was the trigger to the terror. For "wild" is, etymologically, "willed," that is, self-willed, unruled, unmanageable, out of control, uncivilized (as in Spanish, where "wilderness" is *falta de cultura*), and one is there lost, confused, be*wild*ered. It represents for the European mind that part of nature, and that part of human nature, where the hard-learned, hard-won constraints of "civilization" do not operate, where nothing is predictable and therefore everything awaits. It was that place to which the covenant-breakers and cursed are sent by the Old Testament God, into "the great and terrible wilderness" (in the Hebrew text, incidentally, the word is *tohu*, or "chaos," as in the primordial darkness before Creation), and to which sinners go to purge themselves of their natural evils. It was that place so alien to human contemplation that it is seldom even mentioned, only very rarely painted or drawn, and almost never directly described for most of the period from the collapse of Rome to the sixteenth century. And it was that place so unreasonably fearsome that, as Keith Thomas notes, "the encroachment of wild creatures into the human domain was always alarming," even if it was nothing more than a bee flying into a cottage or a robin tapping at a window, either enough to send strong men to bed; the English House of Commons chose to reject a bill in 1604 because a jackdaw flew through the chamber during the speech of its sponsor.

This separation from the natural world, this estrangement from the realm of the wild, I think, exists in no other complex culture on earth. In its attitude to the wilderness, a heightening of its deep-seated antipathy to nature in general, European culture created a frightening distance between the human and the natural, between the deep silent rhythms of the world and the deep recurrent rhythms of the body, between the elemental eternal workings of the cosmos and the physical and psychological means of perception, by which we can come to understand it and our place within it. To have regarded the wild as *sacred*, as do many other cultures around the world, would have been almost inconceivable in medieval Europe—and, if conceived, as some of those called witches found out, certainly heretical and punishable by the Inquisition.*

It is but a short step from the fear of the wild to the love of the tamed and from there to the imperative of human domination and control of the natural world—hence the images of the subjection and mastery of the untamed landscape that are so frequent in late-fifteenth-century culture.

It is there in such celebrations of urban form as Piero della Francesca's *Ideal Town*, an entirely lifeless human construct without a single blade of grass or shadow of tree, dominated by that most controlling of all inventions of Renaissance art, perspective. It guides such assertions of human control over the physical world as the cityscapes and atlases then much in vogue, especially in the *mappemondes* that became the focus of the cartographical craze of the time, some 280 of them produced between 1472 and 1600. It permeates such popular works of adventure as the illustrated romances showing Christian Crusaders "victorious" over the bestial heathens or the imagined victories of Alexander the Great over the "wild men" and monsters of Persia and India.

But of all the images of control, the most pervasive and most

*I have not forgotten St. Francis of Assisi. He is in a sense the exception that proves the rule, and there is no doubt that his feelings about the immanence of God in every living creature (not, however, in God's inanimate products) became, particularly for later hagiographers, an important part of his Christian image. Nonetheless, his saintliness in this regard is less than perfect: we have the story of his rebuking a disciple for cutting the feet off a living pig to feed a colleague, but the rebuke is not for pain or cruelty, only for having failed to apologize to the pig-herder for having damaged his property. Moreover, the record is clear that Francis's influence in the Church was negligible: his Minorite order was solidly Aristotelian and pragmatic by the fourteenth century, having moved far beyond his "sentimentality" to animals; those of his followers who clung to his beliefs, the Fraticelli, were denounced as heretics and burned at the stake even in his lifetime.

Nor have I forgotten the pagan traditions—as, for example, among the Celts—that kept various kinds of worship of nature alive for centuries under the very nose of the Church, durable enough to be cited repeatedly as evidence of Satanism during the periods of the inquisitions and witch-hunts in the sixteenth and seventeenth centuries. But these were decidedly minority and largely rural strains, found for the most part in the northern Germanic and Nordic states, and never very influential, at least in mainstream culture.

revealing is that of the formal Renaissance garden, whose style was perfected and popularized in the last third of the fifteenth century and reached its peak in the middle of the next with such careful artworks as the gardens of Compton Wynyates in England (1520) and Tivoli in Italy (1549). Here it is the hand of man and not the grace of nature that is ever-present: bushes and small trees trimmed in rigid geometric shapes to look like wedding cakes or perfume bottles, closely clipped hedges along geometric walks, blocks of flower beds in uniform colors, carefully edged lawns, and artfully distributed statues, benches, fountains, pools, and bridges. (No chance that there should be such a thing as "an unweeded garden that grows to seed," as Hamlet will later say with typical disgust, where "things rank and gross in nature possess it merely.") If we know this to be the fifteenth-century style, it is almost not a surprise to see in Giovanni Bellini's *Allegory of Earthly Paradise*, painted no more than a year or two before Colón's First Voyage, an extremely stylized garden, more like a porch in fact, paved in geometric tiles with a single small potted tree in the center, surrounded by a low apertured wall and dominated by a kind of raised throne, an Eden that stands in marked contrast to a background of "wild" nature, complete with bare, forbidding mountains and peasant grottoes. It is the ultimate vision of mastered, if totally artificial, "nature."

Such a concept of mastery is not exclusive to early modern Europe, to be sure—the historical record suggests that the attempt to dominate nature began long before, with those ancient societies that became dependent on controlling animal herds and building water-control systems for agriculture and creating the monotheisms that would justify it. But it had seldom developed to this degree—"a compulsion," as the medieval historian John Block Friedman has put it, "of Western man to civilize what is rude and to dominate what is wild"—or so overtly entailed the unbridled hubris of human purpose and human right to possession and use: as Samuel Purchas put it in one of his diatribes justifying colonialism, "to tame nature where she is most unbridled," and "subdue her to the government and subjection which God over all blessed forever hath imposed on all servicible creatures to the natures of man."

The roots of this attitude are essentially biblical, found in that creation myth which is central to any society. The Hebraic Yahweh, so little a part of nature that He actually spends most of His time

using its elements to wreak vengeance on His flock, creates humans in His image and as His surrogate, "to have dominion over" all the animals of the earth, and to "replenish the earth, and subdue it"; this is reiterated enough times to make it obvious what the proper hierarchy of creatures was and who was to get the chief benefit of it all. Keith Thomas's careful study of the importance of this thought for the English refers to "the breathtakingly anthropocentric spirit in which Tudor and Stuart preachers interpreted the biblical story," as with the Jacobean bishop who declared that "the creatures were not made for themselves, but for the use and service of man," or those divines who said the world would be annihilated after Judgment Day since it had been made for humans' use and would have no further purpose after their departure.

There was one other important source of such hubris, as we have seen: what was not authorized by God was sanctioned by the principles of humanism and science then being propounded with such vigor, all of them shot through with notions of human dominance, of what no less a figure than Bacon called "that right over Nature which belongs to [humans] by divine bequest." The humanist Ficino had it plainest: "Man . . . perfects, corrects, and improves the works of lower nature. Therefore the power of man is almost similar to that of divine nature. . . . How wonderful is the cultivation of the soil all over the earth, how marvelous the construction of buildings and cities, how skillful the control of waterways!" Or, as the medievalist A. R. Hall has put it, "The world . . . existed simply to be cooked, or distilled, or mutilated in man's service."

From these elemental patterns in Europe's tapestry of nature ignorance and fear, separation and hostility, dominance and exploitation—a discernible image emerges: of a world more mechanistic than organic, more artificial than intrinsic, more corporeal than numinous, from which intimacy, sacredness, and reverence have all but vanished (it would be the achievement of the next five centuries to eliminate them entirely) and in which something colder, duller, and more lifeless presides instead.

As to the rest of what we know of Europe's ecological heritage, it can be seen written across the face of the land. With some significant exceptions, it is a record of deforestation, erosion, siltation, exhaus

tion, pollution, extermination, cruelty, destruction, and despoliation, all done either in the name of utility and improvement for the betterment of society or, as often, in ignorance of natural systems and the human connections to them.

The landscape of Europe had of course been a victim of this process—in ecological terms, *drawdown* beyond *carrying capacity*—for a long time: what it has meant to be "civilized" since the time of the Myceneans has entailed the increasing domination and control of the natural world. The Greek empires destroyed the once wooded hills and flowing streams of the Mediterranean through deliberate fires and urban encroachment, careless herding and overgrazing, ignorant planting and relentless cultivation; Plato wrote of visiting shrines dedicated to spirits of springs and streams where there were only dry crevices in the land. The Roman successors carried the devastation as far north as Britain, as far west as Iberia, and south into the Sahara, turning lands into granaries for their ever-growing cities and so heedlessly overdeveloping, overharvesting, and overgrazing that millions of square miles of European soils were soon exhausted and the imperium collapsed of its own inability to feed itself. During the long centuries of Christian dominance thereafter, environmental destruction was only intermittent, there being no cohesive empire to achieve it, but even then the rapacious use of nature went unchecked: England, for example, was significantly deforested as early as the eleventh century, with probably no more than 20 percent of it still wooded (and not more than 2 percent virgin) by the time of the Domesday Book in 1086.

Thus the legacy given to fifteenth-century Europe was straightforward: it was right and "natural" for human societies to fell trees, clear brush, "recover" fens and marshes, till soils, plant crops, graze herds, harness beasts, kill predators and "vermin," dig canals and ditches, and in general make use of the bounty of nature that a benevolent Lord had provided for them. Increasingly from the twelfth and especially the fourteenth century on, they did just that with a vengeance. For it was indeed a struggle, a battle experienced in hostile and violent terms, an unending campaign by which, as Marx would later say approvingly, "man opposes himself to Nature . . . in order to appropriate Nature's products."

All the works of human agency were permitted to impose themselves upon the European landscape with as much force as necessary to satisfy human needs. Cities, for example, began to be of substantial size in the fifteenth century (London had perhaps 75,000 people, Rome 55,000, Venice 80,000) and as always put a heavy burden on the surrounding countryside for their food and fuel and building materials; it has been calculated that a city of 3,000 in the eleventh century needed at least 3.3 square miles of developed land outside its walls on which to support itself, and the same probably could suffice a hundred years later, although the dimensions would expand exponentially as the city grew larger. Canals and artificial waterways and engineered streams, too—begun in about mid-fourteenth century, well-developed by mid-fifteenth—extended the human range, sometimes with quite astonishing boldness and ingenuity over plains and up hillsides, so that, as Fernand Braudel notes, "even the most unpromising stretches of water were everywhere exploited." Land was appropriated for crop cultivation and livestock herding on any conceivable terrain to feed or clothe a constantly needy population, the breakup of traditional manorial landholdings and the new inducements of capitalist trade encouraged the clearing and occupation of new acreage wherever anyone, peasant or prince, could get away with it. All in all, there was an enormous alteration of Europe's geography and natural systems in the fifteenth century; or, as Braudel chooses to put it from the alterers' perspective, "The slow toil of winning back [*sic*] land from water—from rivers, lagoons and swamps—from forests and heathland, tortured Europe incessantly and condemned it to superhuman effort." Superhuman indeed.

The costs were naturally great. The fossilized soils of western Europe were not especially fertile to begin with and were normally low in phosphorus, calcium, and certain other basics, and nowhere outside the western Russian steppes and the eastern Balkans were there any areas of that rich black soil upon which abundant grain crops (as in the American prairie) in particular depend. Cultivated lands were harvested over and over, often with four and five crops a year, and although fallow systems and manuring were in general use everywhere, yields were perennially inadequate, harvest failures frequent, and crop efficiencies low, and agriculture in general, as Braudel sums it up, "was an industry that was always in difficulty." Lands set aside for livestock grazing became progressively barren, with the soils compacted and ground cover depleted, and in many parts of Europe it was the custom simply to move herds of cattle and sheep into new areas when the old were exhausted; Spain in particular was devastated by the great herds of Merino sheep, nearly 3 million in all, that were

permitted to forage great tracts of land in Andalusia and Estremadura in ever-widening circles for decade after decade from the mid-fifteenth century on. In the aftermath of both overfarming and overgrazing, the thin soils gave themselves quickly to erosion by both wind and water, and despite subsequent reclamation in the nineteenth century the legacy still can be seen today throughout the Mediterranean basin and in much of France and Germany.

But no alteration of the landscape was so profound or purposeful as the erasure of the European forests. There are no statistics on this destruction—the medieval age was not one to think that way—but considerable circumstantial evidence points in the same direction, and it is not even a matter of much controversy. Europe's was a civilization literally made of wood: wood was used to build its houses, ships, mills, machinery, plows, furniture, plates, pipes, tools, carriages, even clocks and (at times) watches; wood and charcoal provided the fuel for heating and cooking in homes and shops, castles and cottages, and in all industries from bakeries and glassworks to ironworks and arsenals. (An average fifteenth- or sixteenth-century ironworks, Braudel figures, consumed something like 5,000 acres of trees in two years; this rate eventually caused such fuel shortages that sometimes mills were forced to work only one year out of four or five.) All the great forests with which it had been blessed—an essential energy resource denied, incidentally, to the civilizations of the Middle East and much of Asia—were steadily and recklessly depleted to serve that civilization, and by the sixteenth century there were virtually no old-growth areas, no natural ecosystems, left.

It has been estimated that Europe in 1789 used up about 200 million tons of wood a year; extrapolating back to 1500, with a smaller population and fewer industries, we might guess at a yearly consumption of 60 to 80 million tons a year, which works out to an astonishing 1 ton of wood per person per year. Thus we can give credence to the record of a fourteenth-century terra-cotta factory near Dijon that employed 423 woodcutters to cut down the forest of Lesayes and 334 drovers to transport the timber to the ovens. And to the accounts of great clusters and rafts of wood regularly being sent down and occasionally choking the larger rivers of Europe—especially the Vistula, Danube, Rhine, Loire, and Marne—for use in the cities and especially the naval yards at the river mouths. And to the estimate that the great forest of Orléans south of Paris was reduced

1520. There was, says Braudel pointedly, "a whole community whose profession it was to exploit, to utilize and to destroy" these forests, and, he adds in the same approving vein, "the forest was worth nothing unless it was used."

Devastation on this scale did not escape the notice of contemporaries, whatever their feelings about it, since at least local shortages and subsequent price raises were frequent. In Spain, which had to import wood from northern Europe as early as 1500, the writer Antonio de Guevara said ruefully in the 1520s that the fuel in Medina del Campo was more expensive than what it was cooking in the pot. Local ordinances and eventually royal decrees and acts of parliament were promulgated from at least the late fifteenth century (the first of England's many forest acts was passed in 1483), all attempting to put limits on both the numbers and kinds of trees to be felled and some of them encouraging the planting of new trees (especially "useful" trees) to replenish the crop. But these were futile, no more than wood chips in the wind, and they did virtually nothing to stop the unceasing deforestation of Europe in a sure, steady sweep from the Mediterranean littoral on up into the Low Countries and eastward through Germany to the Caucasus. Even King James I of England, who was concerned to halt that sweep and had issued decrees to check it, was forced to say, in some despair, "If woods be suffered to be felled, as daily they are, there will be none left."

Of course, forests were not the only living entities that came to be seen as exploitable resources in the late medieval world. It had long been assumed that animals, too—"made for man" and "subjected to his government and appointed for his use," in the words of an English churchman—were destined to provide humankind with food and drink, clothing, transport, labor, sport, and amusement. It has even been said that it was to this invaluable resource, and primarily to the ox and the horse as domestic animals, that Europe owes the very fact of its civilization. One might add that it owes to this also a considerable part of its ability to have spread its civilization over less favored peoples without large domesticates in both the Americas and the Pacific.*

It was not so much in its exploitation of animals, however, as in

*It has been estimated that because of its animals of transport and burden fifteenth century Europe had a source of power five times as great as that of China. If one considers the almost total absence of large domesticated animals in the New World, it might be said to have had as

its treatment of them that the medieval world truly revealed itself. This is vividly demonstrated by sports that were so popular then: bullfights in Iberia, where a dozen or more animals would be slaughtered in a single afternoon in a single corrida; bear-baiting in northern Europe, where a large, hungry animal would be staked and chained to the ground, its forefeet free for clawing, and set upon by a series of trained, vicious dogs; cockfights throughout western Europe, where a succession of birds, wings clipped and feet equipped with razor-sharp spurs to open flesh wounds, would fight to the death for eight, ten, sometimes fifteen hours at a stretch.

And above all, hunting. This was an activity so popular and common throughout the whole of Europe—among all cultures and all ranks of people, among the ignorant and the learned, commoners and kings, women and children as well as men—that it cannot fairly be called a mere sport, although it was far more than a fashion and only slightly less than a sacrament; it was for many, particularly in the aristocracy, nothing less than what Keith Thomas calls "an obsessive preoccupation." Recitation of the kinds and numbers slaughtered, and the pleasure taken therein, would be dreary, but it is pertinent to suggest the scale: Henry VIII, early in the sixteenth century, on more than one occasion had two to three hundred deer rounded up from his royal forests, penned, and set upon by his hunting dogs; an admiring observer of a wild-bird hunt wrote that "sometimes they take a pretty feathered army prisoners, two or three thousand at one draught and give no quarter"; the Duke of Henneberg in 1581 is credited with shooting "no fewer than 1003 red deer" in a single afternoon, and the elector of Saxony and his party killed 1,532 wild boar on one hunt in 1585.

Along with ferocity in the hunt for "sport" went rapaciousness in the hunt for food. Flesh played a much larger part in the diet of medieval Europe than anywhere else in the world, and so the everyday stance toward animals was also very different: the pig, the partridge, the perch were not so much living animals as potential dinners. Hunting and fishing for consumption were major industries throughout the subcontinent while they hardly existed as such elsewhere, and their practitioners were not bothered, except in rare local instances, with concepts of limits or overkill.

Thus the Mediterranean, once an abundant source of fish, was badly depleted by the fifteenth century ("only limited resources," in Braudel's words) in types of species and numbers of catches. The Baltic, though more bountiful, had been so heavily overfished since the eleventh century that herring were essentially exterminated there by the fifteenth. In England, species such as barbel, bream, dace, and flounder were sharply reduced, in some areas eliminated, by overfishing. And the right whale, in which the eastern Atlantic once abounded, had been so depleted by the sixteenth century that thereafter only occasional sightings were made in the eighteenth and the mammal was extinct by the nineteenth.

Add to this the number of wild species hunted as predators in order to protect domesticated herds and flocks, and the toll rises significantly. Wolves, for example, were virtually eliminated in England by the thirteenth century (some few were said to last in the Yorkshire moors until the fifteenth) and gone from many parts of France by the early sixteenth century; bears also were extinct in the wild by the thirteenth century. Polecats and martens were driven into the remotest corners of northern Europe; foxes, weasels, hedgehogs, and stoats all had bounties on them; crows and ravens and rooks were always fair game for farmers anywhere; and in England a series of official acts of Parliament from the early sixteenth century mandated that local parishes regularly had to see to the extermination of one or another species held to be undesirable. After his lengthy recitation of such practices, Keith Thomas is moved to say: "It is easy now to forget just how much human effort went into warring against species which competed with man for the earth's resources."

Indeed, it is not fanciful to see *warring against species* as Europe's preoccupation as a culture, the source of its food as well as its furniture, its energy as well as its sport, its urban space as well as its agricultural sprawl, its images for the nursery as well as for its pulpits. Disturbing as it may appear from our vantage, a sense of enmity and opposition, as in the more familiar kind of war, seems to have characterized the thought and action of much of fifteenth-century Europe, especially in those dark decades when the inadequacy of nature's yields brought famines and the malignancy of nature's spirits brought plagues. The diaries and letters and memoirs of the day are astonishing to our sensibility in their almost universal failure to praise—indeed their persistent refusal even to take much notice of the beauties of the natural world, either sunset or vineyard, waterfall or hawk flight,

and in their obsession instead with images in nature of violence and morbidity, fear and disgust.

It is fair to ask, should this really be so astonishing? One could argue that all cultures, to some degree, "war against" their environment to achieve the necessities of life, and no society can live without having some impact on, or even doing some violence to, the natural world: it is called survival. Is there something about the attitudes and practices of Europe that make it so different?

The answer would seem to be yes. We know too little about other societies of the world in either a comparable stage of development or contemporaneously in the fifteenth century, and even less about their ecological habits and beliefs, but the general scholarly agreement is that Europe of the late medieval era can be seen to be distinct in a number of important ways.

For one thing, it seems that its fundamental regard for nature was more hostile and antagonistic than was true of any other developed civilization. Other cultures were not uniformly so benign that they never misused their environments: China, for example, permitted its population expansion under several dynasties to lead to the clearing of forests and extermination of certain wild species; the Mayans permitted deforestation that eventually led to erosion and crop failures that in turn caused the downfall of Teotihuacan. But nowhere else was the essential reverence for nature seriously challenged, nowhere did there emerge the idea that human achievement and material betterment were to be won by *opposing* nature, nowhere any equivalent to that frenzy of defiance and destruction that we find on the Western record. Even China at its most statified, when it embarked on some fairly elaborate engineering projects to press back the wilderness, adhered religiously to its idea of "working with nature" and what it saw as carrying out the wishes and designs inherent in a particular river or mountain or waterfall.

"Religiously" is of course the key word. However misused and distorted, the central religions of neither the Asian nor the American civilizations permitted a separation from, or an attitude of dominion over, the natural beings and patterns of the nonhuman world. On the contrary, the religions of India, for example, most particularly Buddhism and Jainism, taught a compassion for all living things and

an interweaving of humankind into the unity of nature; the wilderness of mountain and forest was not fearful there but holy (hence the image of the guru on the mountain ledge), and reverence for one or another Himalayan peak or range played a part in every local form of worship throughout that subcontinent. Of the Chinese beliefs, Taoism was perhaps most unqualified in its reverence for the natural world and the requisite place of humans in the sacred "web of life," but all of them expressed some of that; all of them expressed also a veneration for wilderness, as is seen so plainly in the traditional silk and scroll paintings, an art form well established from the sixth century on explicitly to celebrate and appreciate those places of the landscape that Western artists felt to be so fearsome. (Kue Hsi, in his eleventh-century "Essay on Landscape Painting," put forth the common wisdom that humans in general, artists in particular, "take delight in landscapes" because "the din of the dusty world and the locked-in-ness of human habitations are what human nature habitually abhors"; in contrast, "haze, mist and the haunting spirits of the mountains"—and he goes on to extend this specifically to streams, rocks, trees, and the like—"are what human nature seeks, and yet can rarely find.") And Japan's Shintoism was an explicit nature-worshipping religion, with shrines to the gods and goddesses of mountains, springs, forests, even storms, and ceremonies (still practiced today) such as the decoration of sacred rocks and communal prayers for the passage of the moon across the nighttime sky; wilderness, again, was a manifestation of the divine rather than the lair of the devil.

Europe's technophilia, its unchecked affection for the machine, also distinguished it among world cultures. The reasons for it are deep and tangled, but one can certainly say that Europe was more adept at turning technology to its own uses, and turning its institutions to the service of that technology, than any other society; in the judgment of Lewis Mumford, only Europe saw fit "to adapt the whole mode of life to the pace and capacities of the machine." Even those civilizations (Chinese, Persian, Japanese) that demonstrated a certain proficiency for mechanical inventiveness did not evolve an elaborate abstract system of rationality to go with it—we call it science—and thus did not develop a culture of technology, a self-propelling and self-reinforcing mode of thought that created its own purposefulness and momentum. Only Europeans, once learning of firearms from the

Chinese, went on to perfect them with such ferocious skill that in the space of little more than a century they had far surpassed all other cultures in armaments; only Europeans, too, borrowing again from many other cultures, refined and perfected the technology of ocean navigation so as to become the supreme naval power in the world by the middle of the sixteenth century, Chinese and Ottoman accomplishments notwithstanding.

Europe was also, as we have seen, uniquely a culture in flux, with its institutions and traditions in turmoil during the fourteenth and fifteenth centuries, and far less stable and conservative in its religious customs or political systems than those ancient, encrusted regimes of long-sanctioned rule and unquestioned authority of the kind found in Mesoamerica or China or the Muslim East. It was a society in which rootlessness and restlessness became adventure and curiosity, in which there was little room for constraints and limits and restrictions, in either the physical or the intellectual world. It would have been unlikely for such a culture to have achieved, for example, the power of ocean navigation and *not* to follow it with overseas possession and settlement; it could not have done as the Chinese, who launched several voyages of exploration as far west as the Persian Gulf and the east coast of Africa from 1405 to 1433 and, after some initial trading, decided there wasn't really anything out there superior to what they had at home and thereafter restricted their adventures to modest commercial traffic within the China Sea.

Finally, there was Europe's special emphasis on material acquisitiveness and resource accumulation, usually obtained at the sacrifice of the natural world. Perhaps, as some historians think, this was a response to the difficulties of survival on a relatively small land area—compared at least to the huge spaces of the Ming Dynasty, say, or Muscovy—under continual pressure from a population whose growth was encouraged by Church and prince alike. Perhaps, as Braudel suggests (when he ponders "whether Europe was somehow of a different human and *historical* nature from the rest of the world"), this is a result of its "particular social structures," which were encouraged always to expand and accumulate "on a larger scale and on a more secure footing than elsewhere—more often than not with the state's blessing." But surely the chief reason for this was the power of the still young but increasingly vigorous capitalist system, moving into vacuums left by medieval institutions, the likes of which existed

nowhere else: more materialist, for sure, than any other economy, more expansionist, more volatile and energetic, more linked to growth and progress, and almost everywhere without the kinds of moral inhibitions found in the world's other high cultures. William Woodruff, in his *Impact of Western Man*, a path-breaking study some two decades ago, provides a neat summary:

> No civilization prior to the European had occasion to believe in the systematic material progress of the whole human race; no civilization placed such stress upon the quantity rather than the quality of life; no civilization drove itself so relentlessly to an ever-receding goal; no civilization was so passion-charged to replace what is with what could be; no civilization had striven as the West has done to direct the world according to its will; no civilization has known so few moments of peace and tranquillity.

So it was a very special civilization that was about to set foot on the sands of that small Edenic island in the Caribbean, a most proficient civilization in material terms, capable of immense energy and immense impact, but still dispirited and adrift, turmoiled and beset, sickened by gloom and suffering—and, above all, not quite grounded in the living earth, not quite at ease with itself in the circularity of nature, not quite able to accommodate its limitless genius to the limited world in which, perforce, it lived. A powerful civilization, though, a great people and a strong.

"Blow ye the trumpet in Zion, and sound an alarm in my holy mountain; let all the inhabitants of the land tremble.

"A day of darkness and of gloominess, a day of clouds and of thick darkness, as the morning spread upon the mountains: a great people and a strong: there hath not been ever the like.

"A fire devoureth before them; and behind them a flame burneth; the land is as the garden of Eden before them, and behind them a desolate wilderness; yea, and nothing shall escape them. . . .

"The earth shall quake before them; the heavens shall tremble."

Thus, again, the prophet Joel.

Organizations and Publications with a Focus on the European Invasion

Africa World Press, 15 Industry Ct., Trenton, NJ 08638, 609-771-1666; publishes and distributes excellent books on Africa and the Americas.

Akwesasne Notes, Mohawk Nation, PO Box 196, Rooseveltown, NY 13683-0196. A long-established quarterly on Native American affairs.

Alliance for Cultural Democracy, P.O. Box 7591, Minneapolis, MN 55407, publishes excellent networking journals, *Cultural Democracy* and *huracán* ($15/year).

American Friends Service Committee, 1501 Cherry Street, Philadelphia, PA 19102, 215-241-7169; special project is called "500 Years Is Enough."

American Indian Law Alliance, 488 Seventh Avenue, Suite 5K, New York, NY 10018, 212-268-1347; resource center and advocacy group.

American Indian Library Association, c/o Lisa Mitten, Secretary, 207 Hillman Library, University of Pittsburgh, Pittsburgh, PA 15260; 412-648-7723.

Continental Campaign: 500 Years of Indigenous and Popular Resistance—the leading organizer of North, Central, and South American indigenous struggles, sponsoring conferences and putting out good materials. Write to Campaña Continental, Secretaria Operativa, Apt. Postal 7-B, Sucursal El Trebol, 01903, Guatemala Ciudad, Guatemala, C.A.

Canadian Alliance in Solidarity with Native Peoples, P.O. Box 574 Station P, Toronto, Ontario M5S 2T1, Canada.

Central American Resource Center/Quincentennial Education Project, 1407 Cleveland Avenue N, St. Paul, MN 55104, 612-644-8030; excellent materials for teachers with good ideas about how to use them.

Clergy and Laity Concerned, P.O. Box 1987, Decatur, GA 30031, 404-377-1983; publishes an organizers' packet and information about activists around the country as well as a regular journal with good information and analysis.

Cultural Survival, 53 Church Street, Cambridge, MA 02138, 617-495-2562; events, newsletter, information packets.

In the Heart of the Beast Puppet Theater, 1500 E. Lake Street, Minneapolis, MN 55407, 612-721-2523.

Indigenous Thought, c/o Jan Elliott, 6802 SW 13th St., Gainesville, FL 32608, 904-378-3246. A networking newsletter from the Committee for American Indian History with exciting articles addressing concerns crucial to both natives and nonnatives in their struggles to end oppression.

Indigenous Women's Network, P.O. Box 174, Lake Elmo, MN 55402; publication, *Indigenous Woman*, and community involvement on peace and justice issues.

Latin America Council of Churches, Av. Patria 640 y Amazones, Piso 11, Quito, Ecuador, coordinating 500 years' activities in Latin America, producing materials in Spanish.

NAES Bookstore, 2838 West Peterson, Chicago, IL 60659; a good source of books by and about Indian communities.

National Council of Churches of Christ, 475 Riverside Drive, New York, NY 10115; issued a public statement calling for 1992 to be a year of reflection and repentance.

Network of Educators on Central America (NECA), 1118 22nd St. NW, Washington, DC 20937; excellent classroom resources and programs.

North American Congress on Latin America (NACLA), 151 W. 19th St., 9th Floor, New York, NY 10011, publishes *NACLA Report on the Americas;* several issues will focus on themes reflecting on the past 500 years in the Americas.

Northeast Indian Quarterly, published by American Indian Program, Cornell University, 300 Caldwell Hall, Ithaca, NY 14853, 607-255-6587, which also publishes program guides and curriculum packages for teachers. Well-produced, attractive, timely publications.

Our Developing World, 13004 Paseo Presada, Saratoga, CA 95070, 408-379-4431; working on multicultural curriculum.

Peace and Dignity Journeys, 1301 W. 16th Street, Chicago, IL 60608, 312-733-6363; sponsoring dual relays north from Argentina and south from Alaska, beginning in April and culminating in Mexico in October 1992.

Pueblo to Pueblo, 1616 Montrose #4500, Houston, TX 77006, 800-843-5257; non-profit group which sells products from coops in Latin America.

Rethinking Columbus: Teaching about the 500th Anniversary of Columbus's Arrival in America. A Special Issue of *Rethinking Schools*, 1991. Articles, teaching aids, poems, stories by a wide variety of authors, and a much more comprehensive list of organizations and publications than this one. For information write 1001 E. Keefe Ave., Milwaukee, WI 53212 or phone 414-964-9646.

South and Meso-American Indian Information Center (SAIIC), PO Box 28703, Oakland, CA 94604; publishes a newsletter and was one of the convening groups for the First Continental Meeting of Indigenous Peoples—500 Years of Indian Resistance in Ecuador, July 1990.

Underground Railway Theater, 41 Foster Street, Arlington, MA 02174, 617-643-6916; producing "The Discovery of Columbus," a lively and involving performance available for bookings nationwide.

WBAI-99.5 FM, "Columbus in Context," 505 Eighth Avenue, 19th floor, New York, NY 10018, 212-279-0707; special radio programs to be produced by this Pacifica Radio Network station.

Witness for Non-violence, 1759A N. Marshall, Milwaukee, WI 53202, 414-271-3309; active in training for witnessing at Chippewa boat landings.

Witness for Peace, P.O. Box 33273, Farragut Station, Washington, DC 20033, 202-797-1160; year-long study guide materials.