The Discovery of the New World and the End of the Old

Preliminary Thoughts

American textbooks often carry the history of Europe up into the Renaissance, and then plunge into the Age of Discovery and Exploration as a preliminary to the study of United States history. As a result, we are much more aware of the effect of the Discovery of the New World, as the Europeans conceived it, upon the Americas, than the effect that the opening up of new lands had upon Europe. If we were more aware of the changes that the discoveries caused, we might be willing to concede that these discoveries were a basic factor in the end of the Middle Ages.

Gold and Silver

Columbus' voyage of 1492 was intended to discover a shorter all-water route to China and India than the route around Africa that was being opened up by the Portuguese, and the aim of both was to be able to by-pass the Muslim and Byzantine middle-men through which the spices of the East reached Western Europe. Although Columbus died still believing that he had opened up the Indies to Spain -- which is why Europeans called the native inhabitants of the Americas "Indians" -- most realized that a great land mass lay between them and the spices of the East, and also began to realize that there were sources of gold and silver there.

The natives had amassed a great deal of golden treasure over the centuries, and the first flood of "new" gold into Spain and Europe came as a result of the ***conquistadores*** [Spanish for "conquerors] seizing this accumulation. With the conquest of Peru by Francisco Pizarro, new gold began to be mined; and, with the discovery of the silver veins of San Luis Potosi in Mexico, vast amounts of silver began to appear. The European explorers began to search primarily for gold, for the "Land of ***El Dorado***," a fabled land where, after the king bathed each morning, his subjects would cover his body with gold dust until he shone like the sun. Since the time of the conquistadores, a series of new sources of gold strikes have been made -- ***bonanzas***, from the Spanish word meaning "prosperity" -- Colorado, California, South Africa, the Canadian Klondike. Well over 95% of the gold in use today was mined since 1500.

Gold is like anything else: the more there is of it, the less valuable it is. And so, as gold and silver arrived in Europe from the Americas, the price of everything began to rise steadily. Just to explain why that happened, consider that if a hundred people have one ounce of gold apiece, they all want to buy wheat, and there are only one hundred bushels of wheat for sale, the price of a bushel of wheat will be one ounce of gold. If those same people find a pirate treasure and divide it up so that each of them has *two* ounces of gold, but there is still only one hundred bushels of wheat for sale, the price of a bushel of wheat will be *two* ounces of gold. You can look at it another way. When the amount of gold (or any other medium of exchange) in circulation increases, the value of salaries, rents, and debts drops. There is a simple equation for all of this:

Price = the amount of currency divided by the supply of goods

The steady increase of gold and silver in Europe brought about what historians call ***The Price Revolution***. People on fixed incomes were impoverished; it became more advantageous to owe money than to be solvent. Money lost value every day it stayed in one's pocket, so the only way to prosper was through trade. Nobles could no longer depend on their income from the rents paid by their tenants, and began to use their lands to raise sheep for wool and meat, or to produce other goods for sale. **Land was no longer the basis of wealth, and the land-owners no longer the dominant economic class**.

Food

We have said that most of the population of medieval Europe went to bed hungry and that their diet was unbalanced and boring at best. The new plants that were introduced from the New World changed that situation. A medieval peasant could expect to harvest about 600 pounds of wheat from an acre of land. It took a long time for the Europeans to get used to these new plants, but when that same acre of land was planted in **potatoes** -- native to South America -- the peasant could plan on harvesting ***50,000*** pounds of food. It was even harder for the Europeans

to get adjusted to **corn** -- eating it made many of them sick, and they weren't accustomed to planting row crops in their fields -- but they could harvest 1800 pounds of corn on the acre that had given them only 600 pounds of wheat. Some Europeans, such as the Italians, eventually became used to corn, but it was used primarily as food for chicken, geese and other fowl, and for pigs. If the introduction of potatoes produced a *caloric revolution*, the acceptance of corn brought about a *protein revolution*. Since the land of Europe could now produce more food, the relative price of food began to drop. The productive capacity of the land had caught up with the population, and the average European could now eat more. The Europeans, in turn, introduced corn into Africa and sweet potatoes in China, where these new foods also changed conditions dramatically

He could also eat better, since a number of lesser food crops arrived from the New World that made possible a more varied diet. The French imported **tomatoes**, which they called "apples of love," and used them for ornamental purposes in their flower gardens. They thought that they were poisonous, which, in fact, many of the early varieties were. In time, however, the poison-producing capacities of the tomato were bred out, and the tomato became one of the most popular additions to European cuisine. There were many other food plants brought back to Europe -- particularly many varieties of **squash**, **beans**, **pumpkins**, **peppers** -- that introduced a welcome variety, as well as a wide range of vitamins, into the European diet. The health of the average European began to improve, and his height, weight, and strength increased. As this occurred, his resistance to disease grew.

Drugs

A great deal of attention is paid to the terrible death toll among the native inhabitants of the New World caused by the European's introduction of new diseases for which they had no immunity. It should also be noted that over half of the Europeans coming to the Americas died within a year of their arrival, usually from some fever, and that the death toll among Europeans in the interior of Africa was so great that it remained largely unexplored by them until well into the 19th century. The Europeans were quick to use native remedies for their ailments, and the bark of the chincona tree -- from which **quinine** was extracted -- was of great help to them. The medical establishment of Europe resisted the introduction of these new drugs, however, and it was not until the 1830's, for instance, that quinine was brought into general use. This lag has continued to be the case. It was only in 1952, for instance, that Western medical researchers recognized the value of Rauwolfia, a root that the inhabitants of India had chewed to relieve nervousness for centuries. The active substance was extracted from the root and sold as **miltown**, the first tranquilizer. Given this general resistance to "native remedies," the medicines and medical techniques of the new lands had relatively little effect on Europe. The importance of the drugs of the new worlds lay in another direction.

We have noted that medieval Europeans displayed violent swings of emotions. Part of this may have been simply a difference in cultural norms, but it should be noted that the men and women of medieval Europe had relatively little personal control over their states of mind. Like most other parts of the world, the Europeans had an effective depressant in alcohol, but, unlike any other of the world's civilization, they did not have an **alkaloid stimulant**. These were quickly important from their native lands, and their use swiftly spread. The first was **cocoa** from the Aztecs, a rich source of caffeine, and Europeans began their long love affair with chocolate. Coming next were **coffee**, another source of caffeine, from the Near East, and **tobacco**, adding nicotine to the Europeans' personal stash of drugs. Finally **tea** from the Far East introduced another potent source of caffeine. The Europeans developed the custom of mixing caffeine with **sugar**, an import from India and the Near East, a practice that cut the bitterness of the drink and enhanced its effectiveness.

At the same time, **coca leaves** from South America yielded cocaine, **opium** from Far Eastern poppies provided both opium itself and morphine, and **hashish** from the Near East offered a potent form of marijuana. The use of these narcotics and depressants was widespread until well into the 19th century. It's said that Coca-Cola started out as a medicinal concoction laced with cocaine, and was guaranteed to slow you down, but, when such patent medicines became illegal, the company substituted caffeine for cocaine and guaranteed that their drink would pep you up.

In any event, the exploitation of lands beyond the sea gave Europeans a variety of potent stimulants and depressants, and they now had some control over their moods. Western culture has continued this practice, and few of us go through a day without a smoke, a coke, a cup of coffee, or a candy bar. It is difficult to imagine what people might be like if they did not have easy access to these New World drugs.

Industrial Materials

Less dramatic than the influx of gold and silver, but perhaps more important in the long run were the raw materials extracted from the new lands. The most important single industry in medieval Europe was the manufacture of cloth, and the manufacturers were always looking for colorful **dyes** that would not fade or wash out. They found them in the New World. **Brazil** is named after

a tree in the Near East, the bark of which produced a good red dye; and the islands off the Carolina coast in North America were found to be a good source of a rich and relatively permanent blue dye called **indigo**. Europe was almost deforested, and was quick to import American **wood**. Most North American colonists were expected to unload their belongings from their ship and then fill it with shingles for its return voyage. Tall oaks and pines allowed the Europeans to build larger ships, and they were quick to extract barrels of **pitch** and **turpentine** from the pines and spruces of the New World. American **furs** were popular for both clothing and the making of felt. All of the colonial powers anxiously sought for deposits of **salt**, and most were able to find them.

This list could be extended greatly, but the point should be obvious. European manufacture had been woefully short of industrial materials. The resources of the New World gave it the supplies it needed to produce the surplus necessary to begin a profitable trade with the other parts of the world, parts that Europe had not be able to conquer as it had the Americas.

Knowledge

We have discussed how medieval philosophers and "proto-scientists" based their search for knowledge upon logic, and how the basis of that logic lay in the manipulation of *categories*. The discoverers and explorers began to bring back reports and specimens of phenomena and things that did not fit easily into the categories with which the European intellectuals were accustomed. It was easy enough to say "Socrates is a man," but where does one put the gorilla? Is he also a man? What about the duck-billed platypus? It has a bill, feathers, and webbed feet, so it's a bird, right? But it has scales and swims around underwater, so it's a fish? Or is it a mammal, since it has hair and gives birth to living young? These things were not easy to answer, and it took time to sort them out. Until that was done, however, the logic based upon categories was almost useless. European intellectuals turned from the practice of logical investigation to observing and recording, measuring, and arranging. The patterns that had dominated European thought since **Peter Abelard** fell into disuse, and the logic of categories did not emerge again until the mid-19th century with the publication of Darwin's ***The Origin of Species***

A Conclusion

It's easy to look back upon the men and women of medieval times with a feeling of moral and intellectual superiority. Certainly they were capable of great cruelty and seemed curiously passive in the face of a social organization in which a wealthy and powerful few proclaimed that everyone else was innately inferior. You might ask why the "people" did not demand liberty and equality, why they did not establish education for all, why they kept women in a generally subordinate role, and why a whole lot of other things. They were different in many ways from us, and, by our standards, they were inferior, but it is important to ask the reasons for those differences.

One difference is exemplified by the "Birkenhead Rule." When the the British liner *Birkenhead* was sinking and everyone was trying to get into the lifeboats, someone shouted out *Women and children first!*, and this has been the custom of the sea ever since. A medieval man or woman would never have thought of raising such a cry. A child is a burden upon society, consuming more than it produces for at least the first ten or twelve years of its life. Able-bodied men, however, are an investment that society has already made and from whom it must gain a return. Young women are necessary to restore the losses of population due to wars, famines, plagues, and the other dangers of life, but they do not produce as much as mature men and so are less valuable to society -- unless of course, they fall into short supply. In the middle ages, young men and women would have had first call on the lifeboats, and the young and aged would have been left behind. This may strike you as cruel and inhumane, but that is only because you are rich enough to afford such luxuries as believing that the Birkenhead Rule is the only proper way to behave.

The gulf that lies between you and the men and women of medieval Europe is mostly the difference between your wealth and their poverty. Many of you drive an auto with a hundred horse-power engine. The work of a single man is rated at about 1/8 horse-power, so you have the equivalent of 800 slaves to carry you from place to place. Your rooms are lighted by the equivalent of hundreds of candles, and your closet has more clothes than the entire population of a medieval village possessed. The knives in your kitchen are made of a steel so fine that, in medieval times, only a king could have afforded their equal. You look back upon the men and women of medieval Europe and see their ignorance, dirt, and heartlessness; if they could look at you, they would see only a person wealthy beyond their comprehension. They would also wonder why you should enjoy such riches since they worked much harder and longer than you and had so much less to show for it. And if you could speak to them and tell them how you felt that people should behave, they would think to themselves *Sure, it's easy to make sacrifices and be generous and kind when you are wealthy. I wonder what would happen to their high principles if they were hungry and cold most of their lives?*

I suppose that the basic question is why you *are* so much wealthier than they. The usual answer is that you are enjoying the fruits of global commerce and the Industrial Revolution. But neither of those things would have occurred without the discovery and exploitation of the New World. That's one reason to consider that 1492 is as good a date as any and better than most to mark the end of the middle ages. It also marked the beginning of a 500-year boom economy for Europeans and their descendants, but that's another matter.

RETURN TO THE LECTURE INDEX

Lynn Harry Nelson
Emeritus Professor of
Medieval History
The University of Kansas
Lawrence, Kansas
