

The Family Heritage Series

A weekly discussion of Americanist truths and traditions for those "heirs of all the ages" who will have to preserve that most important inheritance of all — freedom. Produced by the Movement To Restore Decency.



Volume II

Lesson Eighty-Six

Free To Create

LESSON IDEA

One of freedom's greatest benefits is that under it, man will be his most creative. Without freedom, on the other hand, creativity is stifled.

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THE MASTER Creator, who declared, "Let us make man in our own image," has given every individual the ability to create. Man the dreamer is also man the builder. And when man's imagination and abilities are given an opportunity to develop, this creative talent can bear more wonderful fruit than any orchard in the world. Thanks to this gift, every person has the ability to make some significant contribution that will benefit his family, his country, and perhaps the entire world.

The great sculptor Michelangelo translated living thoughts into enduring marble. Beethoven, though deaf, walked in the woods with God, and in his glorious and enduring music expressed the triumph of the human soul over adversity. Shakespeare dipped his pen so deep into the ink of human understanding that after four centuries his plays and poems still stimulate and delight succeeding generations. A group of courageous and inspired statesmen, after defeating the army of England, drafted the Constitution of the United States, and secured liberty for a new nation.

While not all of us will become famous writers, painters, musicians, or statesmen, all of us have been given some creative abilities. Do you think it is important to develop and use these abilities? Why?

[*Let everyone answer.*] Since we will be happiest and most productive when we are exercising these abilities, it is important to ask what conditions are necessary for us to be creative. What are some of the things you can think of that would encourage you to be creative? [*Some factors to mention are necessity, ambition, opportunity, and encouragement.*]

There are many factors that determine how creative someone will be. But certainly one of the most important is freedom. The greatest invention in the world will benefit no one, if the inventor is not permitted to build it or use it. The most beautiful music or the most stirring play will never inspire anyone, if it cannot be performed or read.

For more than 6,000 years, most people have lived in poverty and abject misery. In country after country, for century after century, only a handful of rulers even lived in homes that had windows and chimneys and floors. The vast multitudes of mankind have seldom enjoyed enough food to keep their stomachs filled, or enough clothes to keep their bodies warm. But now, after just a few generations, we in America take well-furnished homes and well-stocked refrigerators for granted. We regard telephones, washing machines, indoor plumbing, furnaces, and automobiles as necessities, while for most people on earth they are unimaginable luxuries.

The tremendous advances that have been made in America are just one illustration of how individual creativity can bring enormous benefits to everyone.

Let us look tonight at the experiences and contributions of one of our creative predecessors, to see if we can discover, in the example of his life, some truths about freedom and creativity that apply to us today.

ELI WHITNEY, the son of a well-to-do farmer, was born in Massachusetts in 1765. After graduating from Yale College, he moved to Georgia. He had planned to become a private tutor, and to study law in his spare time. However, when he arrived in Georgia, he found that the teaching position he had come to fill had already been taken by another young man.

Rather than return to Massachusetts, young Whitney decided to remain in Georgia. An amateur mechanic of considerable ability, he soon became challenged by the extremely difficult and laboriously slow work in the cotton fields. Up until that time, cotton was not only picked by hand but after it was harvested, all of the seeds had to be pulled out of the cotton ball by hand before it could be sold. Whitney determined to invent a machine that would automatically separate the seeds from the cotton.

Within a few months, the young scholar had built the world's first cotton gin. With Whitney's gin, one man could separate the seeds from fifty pounds of cotton in one day. Prior to his invention, it required nearly four dozen men, all working by hand for a full

day, to prepare fifty pounds of cotton for the mills.

As a result of Whitney's invention, do you think that more people or less began growing cotton? What do you think happened to the price of cotton? Because it required so many less workers to prepare it for market, do you think cotton became more expensive, or less?

Yes, the price of cotton went down. Many more persons began growing it. All over the South, cotton acreage was expanded, and the area entered a period of great productivity. In fact, in less than ten years, the annual production of cotton in America increased from less than 5,000,000 pounds to over 50,000,000 pounds.

But that is not all that occurred. The availability of cotton in such large quantities and at such low cost stimulated the development of weaving and cloth manufacturing in the North. Soon machine-produced cloth could be obtained at prices within the reach of everyone. It was no longer necessary for housewives to work late into the night, at spinning wheels and hand looms, to make the cloth for their husbands' shirts and their daughters' dresses.

The invention of the cotton gin made possible good, inexpensive clothing for every American. Ultimately it benefited all of us. But at the time, it did not benefit Eli Whitney. At first, he decided to build a factory in Connecticut to manufacture cotton gins. But his invention was so easy to duplicate and so simple in operation that others decided to build gins, rather than buy one from the inventor. Whitney sued some of the other manufacturers for copying his invention without his permission, but before he collected anything, his own factory burned down and his partner died. And some people even disputed that Whitney had invented the cotton gin. The machine that helped so many persons make more money actually lost money for its inventor.

FOR YOUNGER AMERICANS

The important point to stress in this lesson is that man must be free to be creative. In the United States, where we have enjoyed more freedom than any other nation in history, man's inventiveness and creativity have produced an abundance of goods that was unimaginable just two centuries ago — and is still unknown in most of the world.

Ask younger children to make a list of some of the items in your home that were not available to our pioneer forefathers. Some examples are electric lights, central heating, television, telephones, radios, and refrigerators. What was life like for those early Americans without these inventions? What did they use in place of them?

Are there any countries today where people are not free to be creative? How does the standard of living there compare with ours?

AFTER ALL of this, how do you imagine that Eli Whitney felt about his invention? How would you feel if your invention saved many hours of work, and helped produce many goods, but you received almost no credit or money for it? Wouldn't you be depressed if you saw your idea stolen by others and your factory in flames?

Eli Whitney must have been very disappointed.

But this discouragement did not stop him from applying his creative talents to other efforts. In fact, he turned to a completely different project which made him a very wealthy man. He decided to manufacture muskets.

Now at this time, nearly two hundred years ago, every gun was made completely by hand. A gunsmith worked on one gun, carving the stock, drilling the barrel, filing the trigger, and making all of the other pieces, until it was completed. As a result, every rifle was slightly different from every other rifle. And every part of a rifle was slightly different from the same part in another gun. As you can imagine, repairing such rifles was a problem. A gunsmith would have to make a piece that looked about right, and then file it and fit it and test it until it worked properly.

Whitney decided to use machines to manufacture the basic pieces for rifles. Since each trigger spring would be identical to every other trigger spring, such a step would greatly simplify production and assembly. The parts could be manufactured and the rifles assembled by ordinary workers, not handmade by highly skilled gunsmiths.

Whitney received a contract from the War Department in Washington, D.C. (which we now call the Department of Defense) to produce 10,000 muskets over a two-year period. These government officials assumed that each musket would be handmade by a gunsmith, and they expected to begin receiving some of them right away.

However, it can take much longer to start mass producing something than to build a few by hand. Once all of the machinery is operating, whatever you are making — rifles or roller skates or records —

will come off the assembly line very quickly. But first you have to build the assembly line. Whitney could not even go out and buy the machinery he needed, because in that day most of it did not exist. He had to build the machines before the machines would build any rifles.

At the end of the first year, Whitney's factory was just starting to produce muskets. About 500 were delivered to the War Department. By this time, however, the Department had expected to receive 5,000 rifles, not 500. And Whitney was summoned to Washington, to appear before a committee of officials who wanted to ask him some questions.

NOW REMEMBER, none of these men knew anything about Whitney's plans for mass production. They did not know that Eli Whitney was demonstrating a new principle in manufacturing — the principle of interchangeability. They weren't interested in his problems with machinery; they wanted to know why he didn't have enough gunsmiths making their guns.

If you were Eli Whitney, how would you have convinced these officials that your methods were better than the old ways, that you would soon be producing more guns less expensively than had ever been done before? Well, once again, Eli Whitney demonstrated the importance of individualism and creativity. When he appeared before the committee, he brought enough loose parts to make ten muskets. Before the officials' startled eyes, he dumped the box upside down on the table. While he explained the advantages of mass production, he started assembling a musket. Within just a few minutes, with parts chosen at random and without any special filing or fitting, he had two complete muskets ready. He then passed them around the table for inspection.

Not every official was completely convinced by Whitney's presentation. However, his contract was not cancelled, and in time, he did deliver all 10,000 muskets. Soon, he had many more orders for his mass-produced muskets. And in time, he became a very wealthy man. But it was not until after his death that he was acknowledged as the inventor of the cotton gin.

Eli Whitney demonstrated that the principles of mass production would work. Those first few

FOR SERIOUS STUDENTS

The lives of many inventors were as interesting and exciting as those of explorers, military leaders, and great statesmen. Encourage older students to learn more about the achievements of some of these men, such as Alexander Graham Bell, Charles Goodyear, Issac M. Singer, and Benjamin Franklin.

How did their accomplishments affect our lives? Was freedom important to them? Would they have achieved as much — or anything at all — in a regulated society? Could they have been ordered to make the discoveries for which they are famous? Can anyone be ordered to be creative? Why not?

hand-assembled muskets paved the way for the great factories of today. If it were not for mass production and interchangeable parts, for example, the simplest, cheapest automobile would probably cost over \$50,000 to produce. What are some of the other machines we use that would not exist today or would be impossibly expensive, if it were not for mass production? [*Ask everyone to name some of the machines and tools now in everyday use, thanks to mass production.*]

Concluding Thought

For nearly two hundred years, men and women with imagination and creativity have applied the principles demonstrated by Eli Whitney to make life more comfortable and more enjoyable for us all. And nowhere in the world has man's creative talent flourished more than in the United States.

With less than seven percent of the world's population, and only six percent of the world's land area, Americans have produced more than any other nation. We make more automobiles, more refrigerators, more telephones, and more bathtubs than the rest of the world combined. Our creative talents have been put to work to make us the best-fed, best-clothed, best-housed, and most prosperous people on the face of the earth. Wherever man is free to dream, to experiment, to invent, and to create, the same miracle of creativity can occur.

Unfortunately, for much of man's history, and in most of the world today, people are denied the freedom to be creative. Instead, they are told what they must do and where they must work. But it is impossible to *order* someone to make a great discovery, or to become a great inventor. Where freedom is denied, creativity is stifled. We should be very grateful that Americans have enjoyed the freedom to be creative. And we should not only work to retain these freedoms for ourselves, but to extend them to the rest of the world, so others may also prosper.

Looking Ahead

Next week we'll see how the arts of production developed by Eli Whitney made possible the mass production of the Model T by Henry Ford. And why United States manufacturers outsold and out-

produced French manufacturers — even though the Europeans had originated the idea of a motor car in 1886 and had had it in production at least a decade before their American counterparts.

DURING THE WEEK

Discuss the part freedom and creativity have played in the rapid development of American technology. Ask yourself, or your school friends, why Detroit, Michigan — a city barely old enough to be out of its rompers when compared to Paris, France — would have more factories equipped with jigs and cranes, drills, air hammers, and turret lathes and more workers skilled in using such tools in 1899 than any European city? Or why the United States, as the youngest nation in the world in 1890, would be producing more than one-third of the annual tonnage of iron and steel used by all nations? Or why such a newcomer to nationhood would have the world's most extensive railroad system as early as the 1880's?

The Family Heritage Series

For parents who wish to teach their children the true meaning of liberty, responsibility, and our Americanist heritage.

The Family Heritage Series is an outstanding series of weekly lessons for the home, written to stimulate interest and spark discussion about the legacy we have received.

The Family Heritage Series is for all parents with school-age children. It is sure to be valued by all Americans who participate in its Heritage Hour discussions, and would be especially welcomed as a gift.

The Family Heritage Series is published by the Movement To Restore Decency, a project of The John Birch Society. The annual subscription rate is twelve dollars for fifty-two lessons, mailed monthly. Individual lessons may be purchased in any quantity at four copies for one dollar. Address all orders and subscriptions to The John Birch Society, 395 Concord Avenue, Belmont, Massachusetts 02178. Wallis W. Wood, Editor.

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