



BIG HISTORY PROJECT

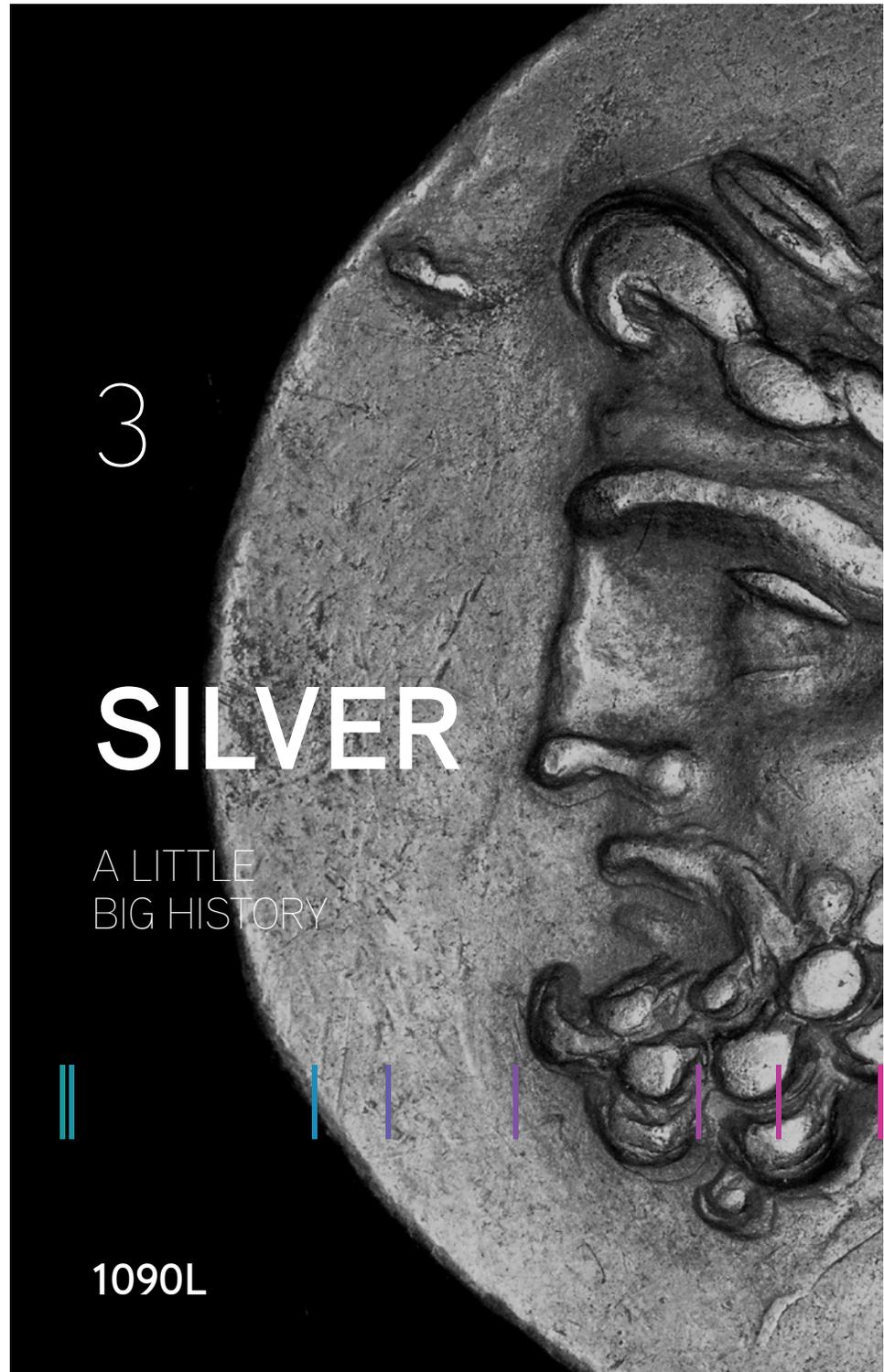
3

# SILVER

A LITTLE  
BIG HISTORY



1090L



# SILVER

A CLOSER LOOK AT  
THE POPULAR METAL

By Big History Project

It's amazing how much you can learn when you look at things through the lens of Big History. Take a medium-weight element like silver, a shiny whitish metal with an unassuming spot (atomic number 47) on the periodic table between palladium and cadmium.

# The value of silver

Silver puts the luster in jewelry, helps our cell phones and MP3 players work better, and even makes hospitals safer. Let's explore the many roles that silver has played throughout history.

What makes silver more valuable to us than other minerals? Its beauty is one thing. This attractive and reflective metal has fascinated men and women for a long time. Silver also is fairly scarce — and things that are both beautiful and rare tend to be worth a lot; think of diamonds, gold, and masterpieces of art. Silver is very durable, too. And it's malleable, meaning it's easy to shape. All these qualities have made silver very useful and valuable to this day.

Silver's monetary value has long been appreciated. Thought to be perhaps the oldest coin, the "Lydian Lion" was minted in modern-day Turkey about 2,700 years ago; early metalworkers — chemists of sorts — made the coins from electrum, an alloy of gold and silver. The Minoan civilization, which flourished on the island of Crete around 2000 BCE, and the Mycenaean people of early mainland Greece imported great amounts of silver that were mined in ancient Armenia. Transport of the metal between all of these places helped to accelerate trade throughout the Mediterranean region.

After the catastrophic destruction of the Minoan civilization in 1600 BCE, and the decline of the Mycenaean culture around 1200 BCE, silver's prominence continued as production shifted with the rising civilization of classical Greece. The silver mines of Laurium, near Athens, paid for the Italian lumber used to build the fleets of triremes, warships with three levels of rowers, that made ancient Athens a naval superpower. The Romans would later adopt silver as one of their main currencies as well.

Silver helped advance global civilization by connecting East and West through trade. Silver was scarce in China, but nonetheless much valued as currency. So, during the Middle Ages, Europeans used silver to buy Chinese goods — gunpowder, tea, ceramics, and silk — which were then carried over the fabled Silk Road. Later, when the Spanish discovered silver mines in Mexico and Peru, they established a sailing route across the Pacific, trading South



A 1739 Spanish silver dollar, also called a "piece of eight"

American silver, some of it plundered, for Chinese silk. Silk was desirable because it made light and cool clothing much in demand by Spanish settlers in the hot, humid climate in parts of Mexico, Central America, and South America. As we'll see elsewhere in this course, when goods get traded, so do ideas. So silver played a role in advancing collective learning.

By the seventeenth century, Mexican "pieces of eight" — also known as "Spanish dollars" — had become the world's first global currency. The U.S. dollar was based on these coins and for a long time many U.S. coins contained silver.

The Latin word for silver is argentum. What South American country sounds like that? Right — Argentina! During the time of the Spanish explorers in the 1500s, Argentina was thought to be rich in what shiny metal element? Silver, of course.

## The many uses of silver

Silver also has strong antibacterial properties that have been acknowledged for millennia. The ancient Greek physician Hippocrates, sometimes called the “father of medicine,” wrote of silver’s healing properties. Early records indicate that the Phoenicians used silver vessels to keep water, wine, and vinegar pure during their long voyages at sea. You may have heard the phrase “born with a silver spoon in your mouth.” That’s not necessarily about being rich. In the eighteenth century, babies fed with silver spoons were thought to be healthier than those fed with spoons made from wood or other materials. Today, many hospitals fight infections with equipment that is embedded with silver. The metal is even used in the thread of some socks. Why? The silver kills bacteria that make the socks smell bad!

Silver is the best metallic conductor of electricity, better than copper or gold. That’s why so many electronics, like your computer keyboard or music player, rely on it. Alloys of silver are used in dentistry, photography, even in the operation of nuclear power plants. Silver also helps keep airplanes aloft. Because of its poor coefficient of friction (meaning, it’s slippery!), silver is used to coat the ball bearings used in jet engines.

But did you know that billions of years ago there was no silver anywhere in the Universe? So where did it come from? Like most other elements in the periodic table, silver was created in dying stars — and in the cataclysmic supernova explosions that sometimes marked their final demise. This is the only place where temperatures get hot enough to fuse hydrogen nuclei together to form larger atoms. These larger, heavier atoms eventually went on to help form planets like Earth. So in a sense, silver, like everything else around you, was made from the first atoms of hydrogen. Where and when was hydrogen created? In the Big Bang itself.

It turns out silver has a pretty big history!

# Image credits

A Greek silver tetradrachm from about 160 BCE

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A 1739 Spanish silver dollar, public domain

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