



Burgundian Renaissance Cabinet, French

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Unknown Artist

French, 1580

Carved walnut and oak with painted panels, linen and silk lining

10 ft. 1 1/8 in. x 5 ft. 3/8 in. x 1 ft. 10 1/2 in.

71.DA.89

Until 2001, most people believed this cabinet was a nineteenth-century piece purporting to be a sixteenth-century cabinet—in other words, a fake. J. Paul Getty bought the cabinet in 1971 against the advice of his **curators**, who did not think it was genuine. The cabinet was in suspiciously pristine condition for one so old. The surface was coated with colored wax, suggesting that someone had tried to make it look older than it really was. Experts concluded that the cabinet was a product of the **Renaissance Revival** of the nineteenth century, when American industrial magnates snapped up Renaissance-style furniture, including many fakes, from cash-strapped European aristocrats. Getty paid \$1,700 for the cabinet, a far cry from its original asking price of \$46,640 some fifty years before. The dubious cabinet was not displayed in the Getty Museum until 2006.



In 2001, curators in France organized an exhibition about sixteenth-century cabinetmaker **Hugues Sambin**.

After a Getty curator visited France to meet with

scholars there, she decided to launch a thorough re-examination of the Museum's cabinet.

Curators, **conservators**, and scientists teamed up to conduct research and scientific analysis.

Science can help authenticate an object by dating the materials from which it was made. When experts re-examined it in 2001, they came to a very different conclusion. They now believe that the cabinet was made in 1580 and is one of the rarest and most valuable cabinets from the French Renaissance in the United States.

The team's first scientific tool was **dendrochronology**, or tree-ring dating. Using this method, they discovered that the oak tree used to make the cabinet's structural panels was harvested in late 1574 or early 1575 in Burgundy, a region in southeastern France. Factoring in the time needed to dry the wood and construct the cabinet, the team determined that the date of 1580 painted on the cabinet was indeed accurate.

Scientists then used **carbon dating** to date the surface wood of the cabinet. It is walnut, a wood with an irregular growth **pattern** that cannot be dated using dendrochronology. Scientists took tiny samples from the walnut and from the frayed edges of the silk and linen lining in the middle drawer. All the samples dated to between 1400 and 1600.

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The team also used another tool: their eyes. They examined the marks left on the wood by woodworking tools, which can help to date a piece of furniture. The rough marks on the back of the cabinet, for example, were made by a hand-held saw and a type of woodworking tool, known as a plane, used in the sixteenth century. The walnut and oak parts of the cabinet also have identical marks from a **bench dog**, a toothed iron clip used to secure wood to a workbench. This suggests that both woods were worked on the same bench at roughly the same time. Under a layer of red velvet fabric in the cabinet, the team found old nail holes from an earlier lining. These holes held traces of the original sixteenth-century fabric that still lines the middle drawer. Analysis of the tacks and tack holes on the door of the cabinet provided further proof of authenticity.

The team delved into archival sources to learn more about the source of the cabinet. Curators located a 1596 household inventory that describes two French Renaissance cabinets. One of the cabinets is now in the Museum of Time in Besançon, France, and has been definitively dated to 1581. The other cabinet may be the Getty cabinet. The paintings and carvings on the two cabinets were closely examined by curators. Minute clues and subtle coincidences of style indicated that the cabinets may well have been made by the same artist or group of artists. Who was this person or persons? Curators, conservators, and scientists continue to work on this mystery.

Other Background Information for Lesson *Scientific Method*

How carbon-14 dating works

The element carbon exists naturally on Earth in two stable forms, or isotopes, known as carbon-12 and carbon-13; in carbon-13, the nucleus of the atom contains one extra sub-atomic particle called a neutron. A third isotope of carbon with two extra neutrons, known as carbon-14 (C-14), is produced in the atmosphere when atoms of nitrogen are blasted by high-energy cosmic rays streaming in from space. The C-14 atom is unstable—radioactive—and eventually decays back into nitrogen-14. Because some of the radioactive atom always exists at a low level in the atmosphere and on earth, it gets incorporated at a predictable rate into the cells and tissues of all living things, from microscopic bacteria to animals to plants. As an example, the organisms ingest the C-14 containing carbon dioxide molecules as part of their natural metabolic processes.

Upon death, organisms no longer take in C-14, and so as the isotope decays back to nitrogen-14, its relative abundance steadily decreases over time. Measuring the amount of C-14 in something originally derived from organic material, then—such as the wood used to make the cabinet—tells the amount of time that has passed since the organism (in this case, the walnut tree) it came from was last alive.

What that means, however, is that any contamination of an object that was more recently alive will raise the relative abundance of C-14 atoms, producing an apparently younger age. In the case of the Getty cabinet, scientists drilled into the wood and took samples from below the surface. This ensured that wax or polish made from organic materials applied to the surface in recent years would not contaminate the sample.



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Questions for Teaching

This object is a piece of furniture. What do you think it might have been used for?

What do you think it is made of?

What sort of person might want or need this type of furniture?

If this was a piece of furniture in your home, where might you place it?

What components of this cabinet remind you of other cabinets you have seen in someone's home or in magazines? What components are different?

