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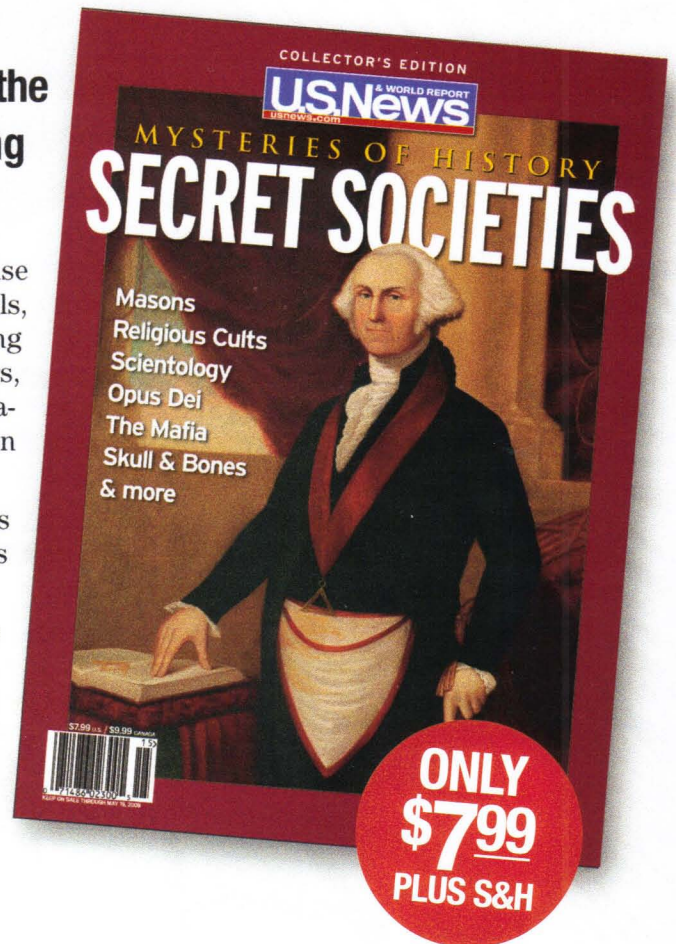
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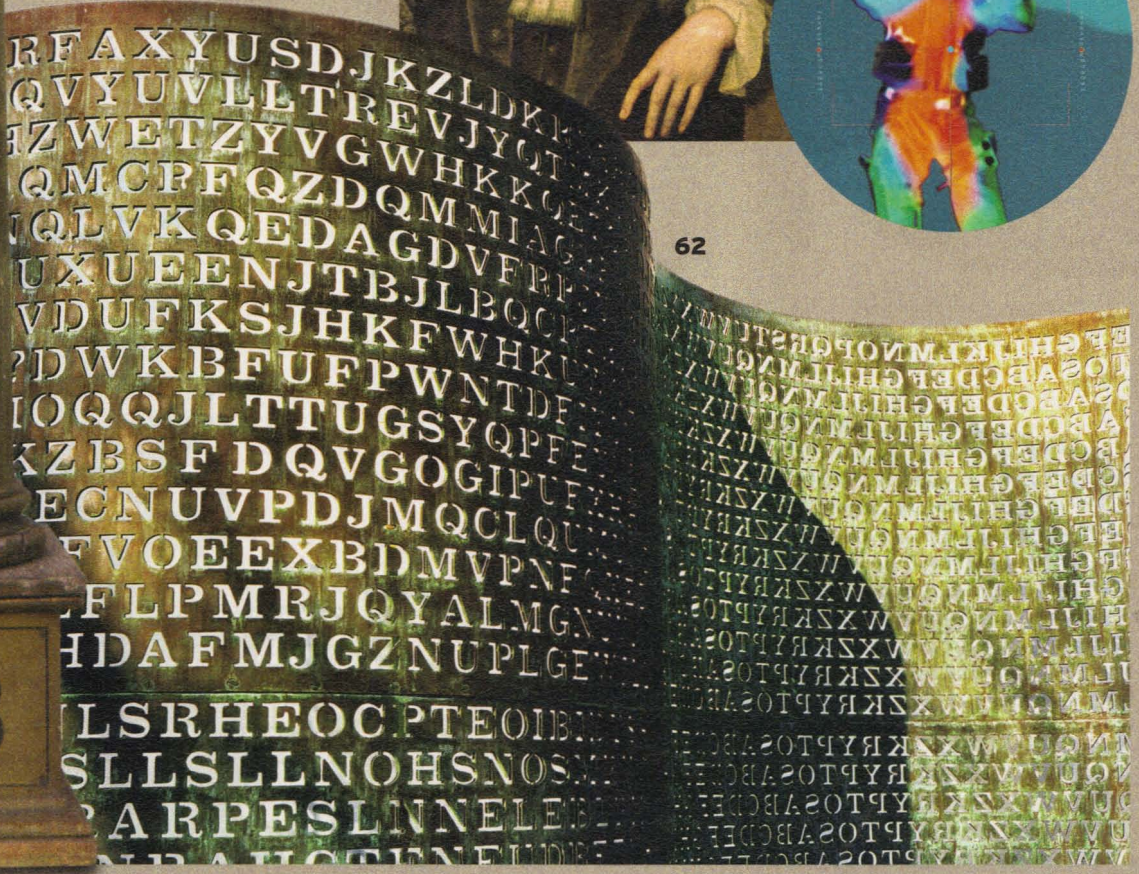
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Entering a

**ESOTERIC
MAJESTY.**
The House
of the Temple
in Washington

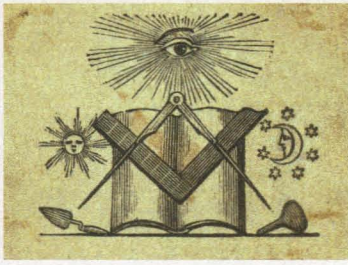
Mystic World

‘The Lost Symbol’
resurrects
the forgotten
teachings of
the Ancient
Mysteries

THE HOUSE OF THE TEMPLE
SCOTTISH RITE OF FREEMASONRY

Edinburgh Chapter 23rd
Museum / Library

1753



ICONIC IMAGES.

Some symbols of Freemasonry, including the all-seeing eye, the level and compass, and the Bible

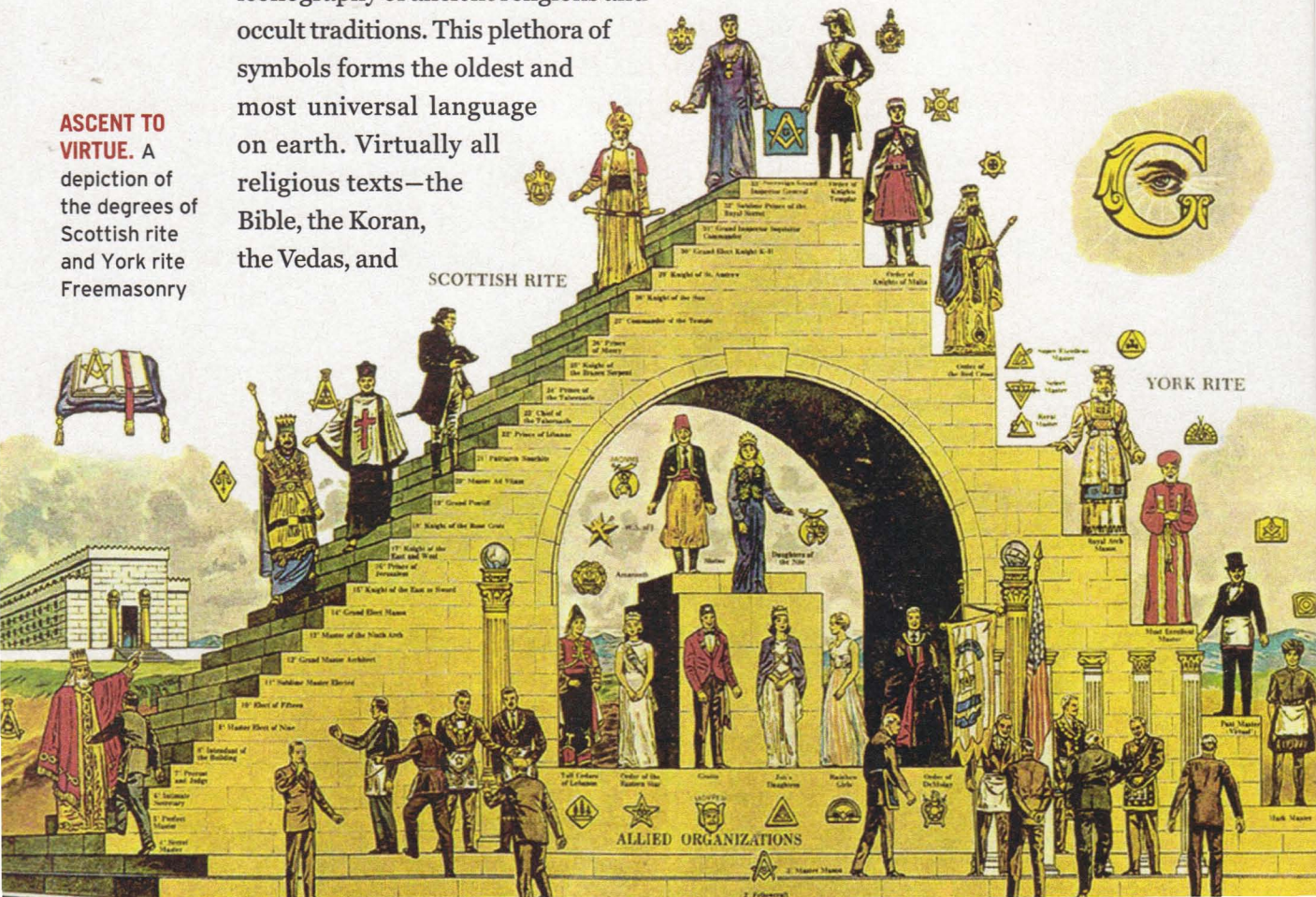
Dan Brown has an ambitious agenda in his new book, *The Lost Symbol*. While his alter ego, Prof. Robert Langdon, rushes around Washington in a desperate attempt to rescue his old friend Peter Solomon, Brown is busily offering his own survey course on the humanities. His grand sweep encompasses, among other things, cosmology and physics, pre-Christian religions, the Enlightenment, Freemasonry, kabbalah, theosophy, alchemy, and cutting-edge scientific technology. And that's just for starters.

Brown returns in this novel to his American roots. Though the action takes place in the fictional present, its reference point is the early American republic and the founding of Washington, D.C.—a city and, indeed, a nation built by men who were steeped in the rational ideals of the European Enlightenment. Many of them were Freemasons, part of a brotherhood that grew in 17th-century Great Britain out of a medieval masons' guild. This order taught religious tolerance, benevolence, and moral self-improvement by means of an elaborate series of esoteric rituals. For over three centuries, Freemasons have played an important role in America's charitable and civic affairs. Brown himself recently expressed his admiration for the organization in a letter to American Freemasons of the Scottish Rite, Southern Jurisdiction, saying that the novel was "an earnest attempt to reverentially explore the history and beauty of Masonic Philosophy."

The craft's symbols—the sun, moon, and stars, masons' tools, columns, Solomon's Temple and Seal, alchemical elements, and the rose cross, to name just a few—are part of the rich iconography of ancient religions and occult traditions. This plethora of symbols forms the oldest and most universal language on earth. Virtually all religious texts—the Bible, the Koran, the Vedas, and

ASCENT TO VIRTUE.

A depiction of the degrees of Scottish rite and York rite Freemasonry

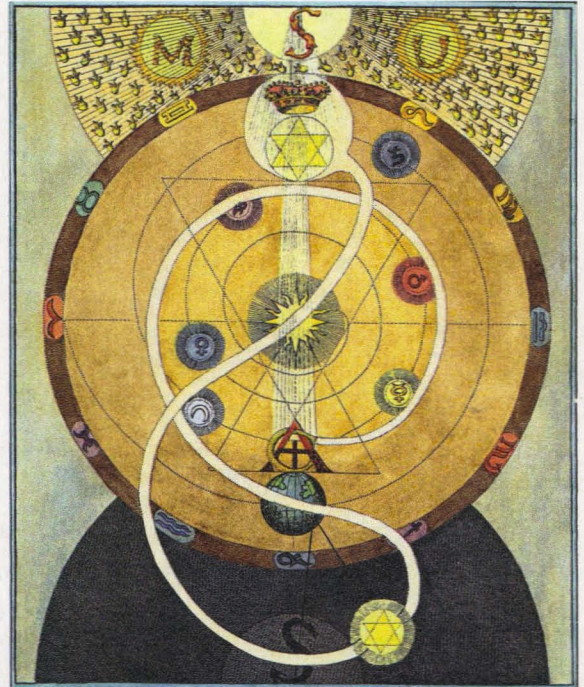


others—incorporate symbols. They are central to religious and philosophical expression because they are replete with meaning and can communicate complex ideas. According to Janet Soskice, professor of philosophical theology at the University of Cambridge in England and author of a new book, *The Sisters of Sinai: How Two Lady Adventurers Discovered the Hidden Gospels*, “Symbols, like the American flag or the Star of David, are saturated signs. They carry narratives and histories with them.”

But some of their deeper meanings have been lost, says Brown, and must be recovered by “adepts” who, through study and effort, become initiated into the Ancient Mysteries. This tantalizing notion of a hidden reality—which lies beyond what science can yet ascertain—has long been a subject of interest to scientists, philosophers, and theologians alike. Brown is equally fascinated by the topic. Judging by how often he mentions such 17th-century figures as Isaac Newton, Francis Bacon, and Elias Ashmole, founder of the Ashmolean Museum in Oxford, he is particularly interested in the members of the Invisible College, the forerunner of the Royal Society in London. They were the originators of modern science. They advocated the use of empirical reasoning but at the same time were conversant in the ideas of esoteric societies such as the Freemasons and Rosicrucians and experimented with alchemy and magic. Characterizing Newton’s science in an essay written in 1946, economist John Maynard Keynes said, “Newton was not the first of the age of reason. He was the last of the magicians ... because he looked on the whole universe ... as a secret which could be read by applying pure thought to ... certain mystic clues which God had laid about the world to allow a sort of philosopher’s treasure hunt By pure thought, by concentration of mind, the riddle, he believed, would be revealed to the initiate.”

To some extent, even in the 20th and 21st centuries, Brown says, physicists such as Albert Einstein and Werner Heisenberg have shared Newton’s mystical interest. And to make that point even more forcefully, he casts Katherine Solomon, his fictional heroine in *The Lost Symbol*, as a noetic scientist. Solomon’s work mirrors what is actually being done today in some scientific circles. She believes, for example—like Lynne McTaggart, author of *The Intention Experiment*—that human intention has a measurable effect on the universe.

As for Brown, he has his own utopian purpose: to recall the example of America’s enlightened founders and to explain how, throughout history, a set of spiritual truths has lived on in the Bible and in other religious texts and been carefully preserved by groups such as the Freemasons and Rosicrucians. These truths have helped some to attain nearly divine wisdom and power. And so, with the first Masonic president—pictured as a god in Constantino Brumidi’s *The Apotheosis of George Washington*—as an unspoken model, Brown challenges every virtuous person to embody the words cited by Freemason Manly P. Hall, author of *The Secret Teachings of All Ages*: “Know ye not that ye are gods?” —Amy D. Bernstein



ROSIKRUCIAN COSMOLOGY.

An engraving by William Law illustrating, among other things, the union of Christ and Adam

The Search for the Lost Symbol

When world-famous symbologist Robert Langdon is summoned to Washington to help out his old friend Peter Solomon, he has no idea that he's going to find himself tracking down a demonic murderer hellbent on exposing the secretive Masons and causing a global crisis. Langdon's path takes him inside some of

America's most venerable buildings, from the Capitol and the Library of Congress to the National Cathedral and the Washington Monument—and reveals a few things you never learned in history class. Here, a bird's-eye view of the landmarks in the novel (numbered below) and a description of what happens where.

11. CATHEDRAL COLLEGE:

Katherine Solomon and Langdon use the basement kitchen to boil the pyramid's capstone—and reveal another clue to the mystery.

13. KALORAMA HEIGHTS: Holed up in a mansion in this tony neighborhood, Mal'akh hides his captive, Peter Solomon, while conducting rituals and deadly science experiments in his basement. Later, he "drowns" Robert Langdon there, drains the blood from Katherine Solomon, and kills everyone who tries to stop him.

1. HOUSE OF THE TEMPLE: At the beginning of the novel, Brown's villain, Mal'akh, takes the vows of a 33rd-degree Mason inside the House of the Temple, headquarters of the Scottish Rite of Freemasonry in the Southern Jurisdiction.

12. FRANKLIN SQUARE: The CIA's Sato stakes out the area near the Almas Shrine Center, hoping to nab Mal'akh, while sending Katherine Solomon and Langdon to Kalorama Heights.

10. WASHINGTON NATIONAL CATHEDRAL:

On Bellamy's instructions, Katherine Solomon and Langdon seek out the help of the cathedral's dean, a fellow Mason.

9. METRO CENTER: In this subway station at Freedom Plaza, Katherine Solomon and Langdon elude the CIA agents searching for them, taking the Red Line to Tenleytown while the agents wait for them at the Blue Line exit in Alexandria.

15. WASHINGTON MONUMENT: The Egyptian obelisk, in which *Laus Deo*, or "Praise God," is inscribed, holds the secret of the Lost Word in its cornerstone, according to Brown.

VIRGINIA AND MARYLAND LOCATIONS

14



KRYPTOS SCULPTURE, CIA HEADQUARTERS, LANGLEY, VA.: The cryptogram on this sculpture in a courtyard on the CIA grounds, which is referred to at the end of the novel, has never been fully deciphered.

8



GEORGE WASHINGTON MASONIC NATIONAL MONUMENT, ALEXANDRIA, VA.: CIA agents are fooled into thinking that Katherine Solomon and Langdon are heading to this Masonic landmark via the Washington Metro's Blue Line.

WHO'S WHO IN THE NOVEL



Robert Langdon: Everybody's favorite Harvard symbolist and Da Vinci decoder still has a photographic memory, encyclopedic knowledge in the face of danger, and a Mickey Mouse watch. This time, he must solve a mystery at the heart of the U.S. Capitol to save his friend Peter Solomon—and the nation itself.



Peter Solomon: Langdon's mentor is a prominent academic and 33rd-degree Freemason who heads the Smithsonian Institution. As "American royalty," he has been blessed with great privilege but has also endured great tragedy. He has just been kidnapped as the book opens.



Mal'akh: Bald, tattooed, and musclebound, Brown's villain is adept at the art of transformation, helping him to infiltrate the Masons, kidnap Peter, and send Langdon and Katherine on a quest against time for Peter's life. His desire for revenge is insatiable and threatens society's very core.



Katherine Solomon: The younger sister of Peter Solomon, Katherine is a groundbreaking noetic scientist (and potential Langdon love interest) who runs a secret laboratory within the Smithsonian. Her findings promise to change the world as we know it.



Warren Bellamy: The African-American architect of the Capitol has access to every federal building in the city. As a Freemason, he's devoted to keeping the secrets of the brotherhood—regardless of the cost.



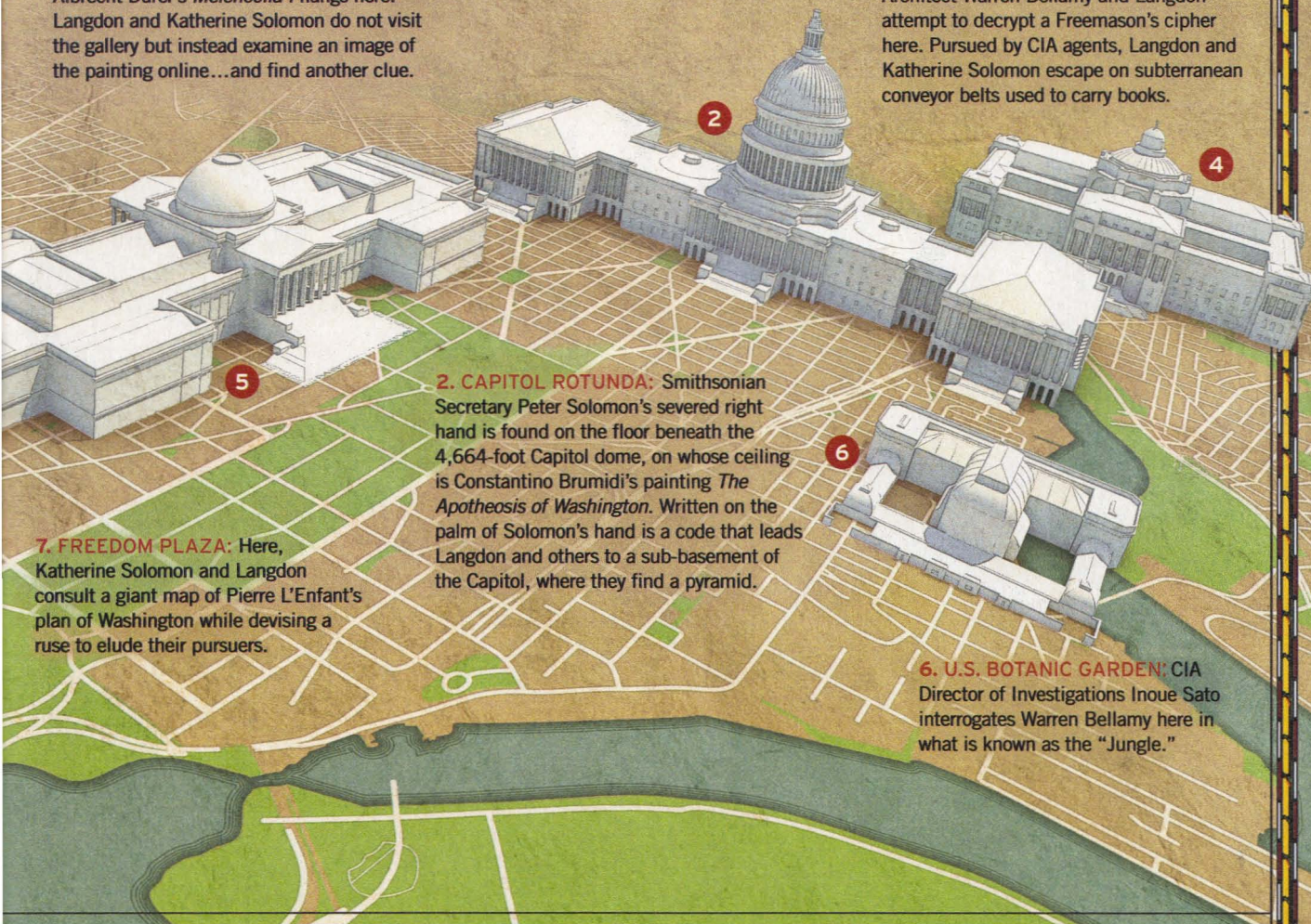
Inoue Sato: Tiny but tough, the Japanese-American director of the CIA's Office of Security is a formidable force who will stop at nothing to protect national security. But is she on the right side?

5. NATIONAL GALLERY OF ART:

Albrecht Dürer's *Melencolia I* hangs here. Langdon and Katherine Solomon do not visit the gallery but instead examine an image of the painting online...and find another clue.

4. LIBRARY OF CONGRESS:

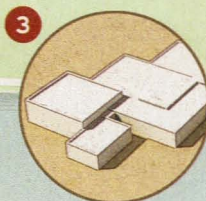
Capitol Architect Warren Bellamy and Langdon attempt to decrypt a Freemason's cipher here. Pursued by CIA agents, Langdon and Katherine Solomon escape on subterranean conveyor belts used to carry books.



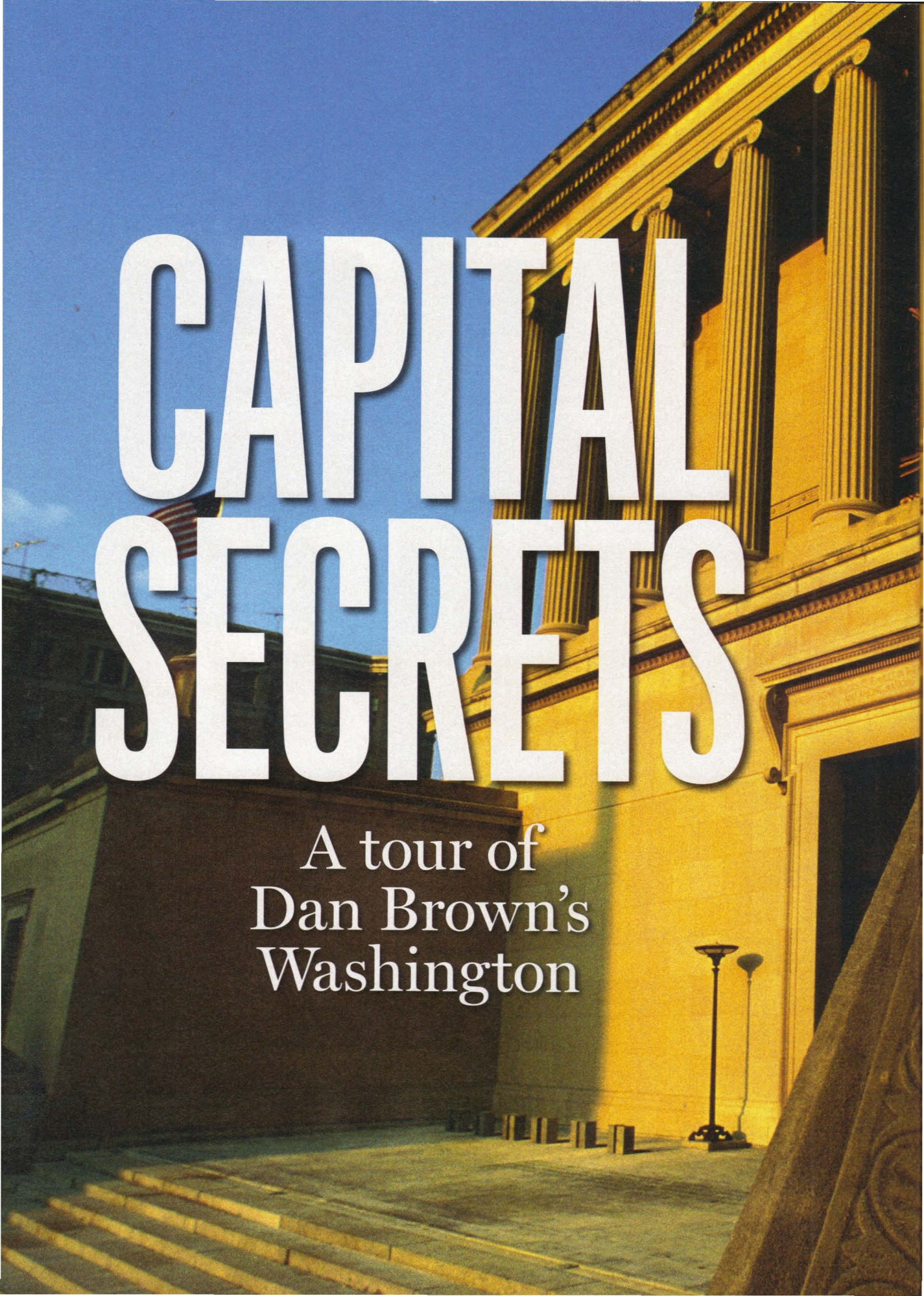
7. FREEDOM PLAZA: Here, Katherine Solomon and Langdon consult a giant map of Pierre L'Enfant's plan of Washington while devising a ruse to elude their pursuers.

2. CAPITOL ROTUNDA: Smithsonian Secretary Peter Solomon's severed right hand is found on the floor beneath the 4,664-foot Capitol dome, on whose ceiling is Constantino Brumidi's painting *The Apotheosis of Washington*. Written on the palm of Solomon's hand is a code that leads Langdon and others to a sub-basement of the Capitol, where they find a pyramid.

6. U.S. BOTANIC GARDEN: CIA Director of Investigations Inoue Sato interrogates Warren Bellamy here in what is known as the "Jungle."



3. SMITHSONIAN MUSEUM SUPPORT CENTER, SUITLAND, MD.: In the novel, Mal'akh hunts down Katherine Solomon in her top-secret lab, hidden away in Pod 5 of this building, just after drowning her assistant, Trish Dunne, in a tank containing a giant embalmed squid.

The background of the cover is a photograph of the U.S. Capitol building in Washington, D.C., taken at dusk. The sky is a deep blue, and the building's facade is illuminated with a warm, golden light. The architecture features prominent classical columns and a pediment. In the foreground, a set of stone steps leads up to the building. A tall, thin lamppost stands near the base of the building. The overall mood is mysterious and historical.

CAPITAL SECRETS

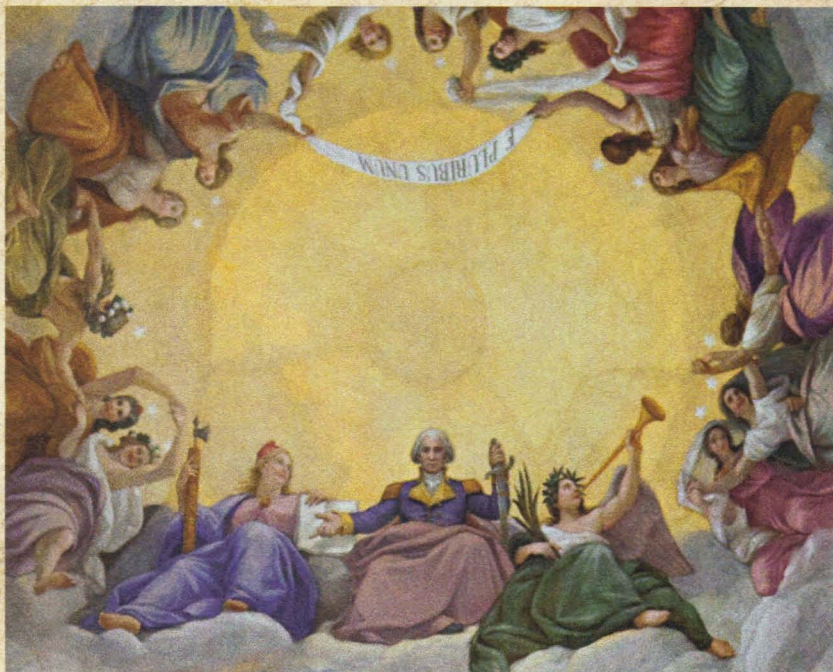
A tour of
Dan Brown's
Washington



MASONIC MECCA.

A sphinx stands guard outside the House of the Temple, site of *The Lost Symbol's* opening scene—the initiation of a 33rd-degree Freemason.

In *The Lost Symbol*, Dan Brown sets the action in downtown Washington and spotlights the potent connection among Freemasonry, the Founding Fathers, and the American Establishment. In the process, he enlists a wealth of historical anecdotes. It's an easy exercise, since most of the city's landmarks—including the Capitol, the National Cathedral, the Washington Monument, the Jefferson and Lincoln memorials, and even the White House—were designed, built, or dedicated by Freemasons as part of their mission to create a capital city worthy of a great nation. Here, **Christopher Hodapp** reveals the Masonic influence behind nearly all of the monuments visited by hero Robert Langdon as he races against time to solve clues and save his friend Peter Solomon.



A PRESIDENT ASCENDING

While underneath the vast Capitol dome, Robert Langdon admires Brumidi's *Apotheosis of Washington*, in which the first president is seen as a god.

THE CAPITOL

When the United States Constitution was adopted, it was generally believed that the heaviest concentration of power within the government of the United States was vested in the House of Representatives and the Senate. Therefore, the Capitol building was given a prominent place in the physical design of the federal city. Pierre L'Enfant's plan for Washington placed it on Jenkins Hill, the highest point in the city, both to show predominance in the government and to symbolize that no man was above the law.

During a contest that was held in 1792 to choose a design for the Capitol itself, there was a last-minute entry by William Thornton, who was born in Tortola in the British West Indies and raised by Quakers in England. His proposal for the Congress House was accepted by the committee and President Washington for its "grandeur, simplicity, and convenience."

Benjamin Latrobe, the first principal architect of the Capitol building, hired in 1803, was a Freemason. Ionic, Doric, and

Corinthian columns are well represented all over the Capitol building. In Masonic ritual, these "orders of architecture" are described as "the three great pillars of Freemasonry": wisdom to continue, strength to support, and beauty to adorn all great and important undertakings.

Columns in the vestibule outside the Senate have detailed capitals that depict ears of corn, a Masonic symbol of plenty used in cornerstone ceremonies. Other columns contain capitals with tobacco leaves or magnolia blossoms. Latrobe had designed these to be different from the classical forms, creating new, uniquely American columns.

The Capitol building has an enormous collection of artwork. The building itself is decorated with friezes, murals, and paintings that tell the story of the United States by depicting important moments in history or abstract representations of the philosophy of American laws and principles. Statuary has been commissioned or donated over the past two centuries to commemorate heroes from all across the country.

Masonic enthusiasts will find much in the way of the fraternity's influence on

America carved in stone and marble or emblazoned on ceilings throughout the U.S. Capitol.

THE ROTUNDA

In the eye of the Capitol's Rotunda dome, Constantino Brumidi's painting *Apotheosis of Washington* represents George Washington ascending into heaven. The word *apotheosis* means glorification, or rising of a person to the rank of a god. Washington is depicted between two female figures, one representing liberty, the other victory and fame. Thirteen more women, symbolizing the original 13 states, surround them in celebration. The image was undoubtedly inspired by the over-the-top description of Washington's death and "ascension" in Parson Mason Locke Weem's notorious book, *A History of the Life and Death, Virtues and Exploits of General George Washington*.

The actual death of Washington was considerably quieter and less theatrical. Elisha Cullen Dick, a Freemason and past master of Washington's Lodge in Alexandria, stood at his



CAPITOL CRIME.

Langdon arrives in Washington and finds the severed and tattooed hand of his friend Peter Solomon under the building's great dome.

deathbed. When the president died, Dick went to the clock in the room and stopped its pendulum from swinging, preserving the moment forever. The clock is part of the museum collection at the George Washington Masonic National Memorial.

The painting's placement, at the top of the Rotunda dome, is directly over the crypt that lies beneath the Capitol and the Rotunda's floor. Before Washington's death, the plans for the Capitol included a burial vault for the president. Washington wasn't wild about the idea himself, and was buried in a family crypt at Mount Vernon, following his wishes. In the middle of the crypt's floor is a compass rose. It marks the very center of the federal city, the point from which all streets are numbered.

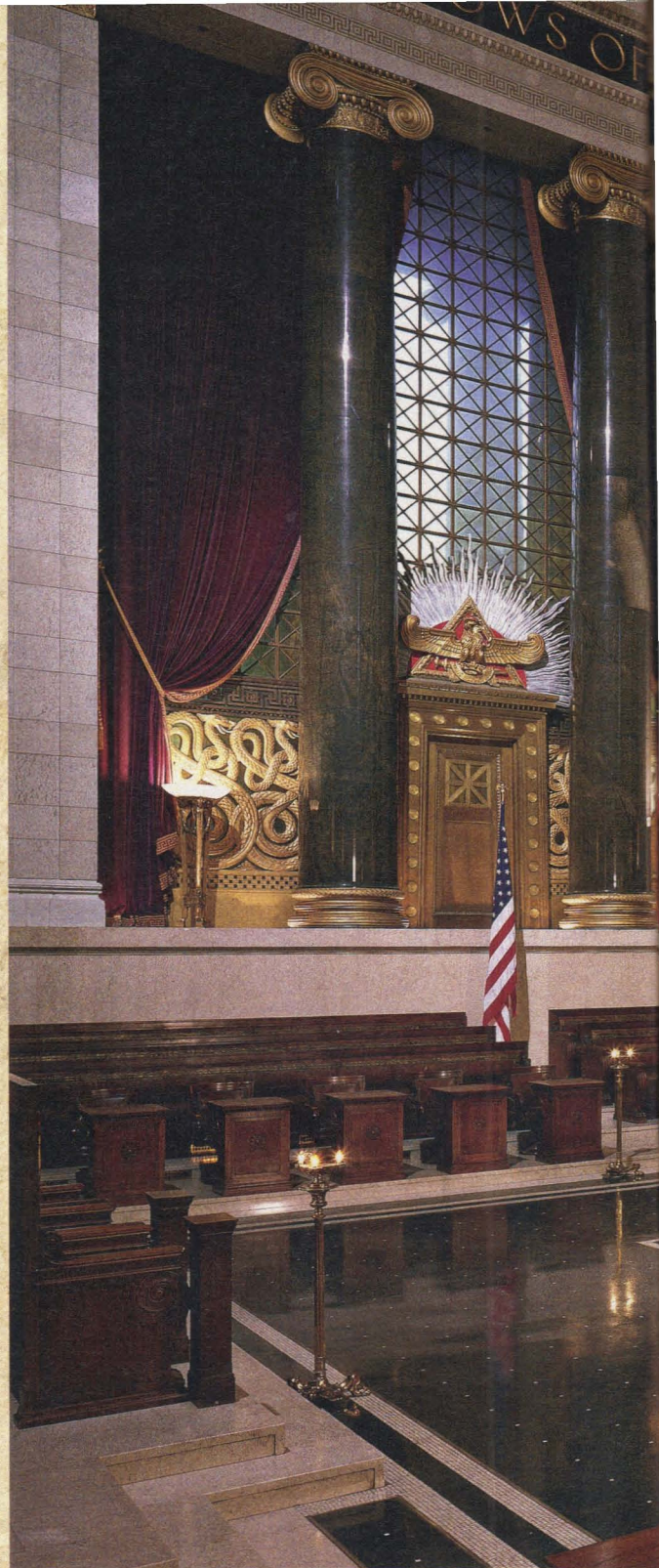
The outer ring of ceiling frescoes has panels representing war, science, marine, commerce, mechanics, and agriculture. Masons should look carefully at the science image—a teacher demonstrates the proper use of the compass, one of the principal symbols of Freemasonry, while a group of famous American inventors looks on. There is a bit of unintended irony in the group of scientists. Benjamin Franklin and Robert Fulton were both Masons; Samuel Morse, inventor of the telegraph, was a staunch anti-Freemason. Morse looks understandably grumpy about the company he's keeping.

THE HOUSE OF THE TEMPLE

The House of the Temple, the headquarters of the Ancient and Accepted Scottish Rite, Southern Jurisdiction, is without equal in the world of modern Masonic architecture and looks exactly like the headquarters of a secret society. Its imposing facade, guarded by two sphinxes, does indeed conceal magnificent treasures. Completed in 1916, the building and much of its interior decoration were designed by architect John Russell Pope, whose other accomplishments include the Jefferson Memorial.

The design is based on the legendary Mausoleum at Halicarnassus in Persia, one of the Seven Wonders of the Ancient World. The original mausoleum was built as the burial place for King Mausollos of Caria in about 350 B.C. in southwestern Turkey on the Aegean Sea, in what is today known as Bodrum. The House of the Temple is related to the ancient mausoleum in more than just architectural detail. It's filled with libraries, museums, and even a tomb.

The Scottish rite draws upon many ancient cultures and religions for its ritual ceremonies and moral teachings, with details of Greek, Egyptian, and Persian origin. Symbolism is in every crevice: There's even a manhole cover behind the rear entrance inlaid with glass in the shape of a Seal of Solomon. As you approach the entrance, two massive 17-ton sphinxes guard the steps. The sphinx on the right, its eyes closed in contemplation, symbolizes wisdom, and the one on the left, its eyes wide open, symbolizes power. Look up and you will see 33 Greek Ionic columns (themselves a Masonic symbol of wisdom) supporting the upper tier, capped by what resembles a stepped pyramid. Some compare the "unfinished pyramid" on the top of the House of the Temple to the unfinished pyramid in the Great Seal of the United States and have attempted to make a symbolic connection, but the design is actually taken from a description of the mausoleum by the Roman author Pliny in his work *Natural History*, written almost 2,000 years ago.



Albert Pike, sovereign grand commander for the Scottish Rite's Southern Jurisdiction, lived in the romantic Victorian period, when the public had an endless fascination with Egyptian, Assyrian, Hebrew, Greek, and Roman imagery, and he injected it into his rewritten ceremonies for the rite. As a result, the House of the Temple combines those influences architecturally. Passing through the bronze doors, you enter a lavish hall lined by deep green marble Doric columns, ending with a grand staircase. Greek, Egyptian, and Assyrian stat-



DEATH OF A DEMON.

The dramatic demise of Mal'akh, the novel's serial killer, takes place in the House of the Temple on the ritual altar in the middle of the majestic Temple Room. It lies directly below a large skylight decorated with double-headed eagles.

ues, carving, and details fill the room, lit by tall brass sconces.

The grand staircase leads to the stunning Temple Room, the ceremonial meeting place of the 33 supreme commanders of the Scottish Rite Southern Jurisdiction. Each stained-glass window is adorned with a brass sculpture celebrating illumination, the symbol for knowledge. The symbol for the order, the double-headed eagle, is frequently represented in an elongated Egyptian style, as in the panels around the skylight.

The Temple Room is actually used for only a few ceremonies,

such as the meeting of the 33rd-Degree Supreme Council. For their regular, nonceremonial meeting, the members gather in the Executive Chamber, a smaller and slightly cozier room that contains just 33 seats, one for each member of the council.

The temple is also home to the largest Masonic library in the United States, which includes Albert Pike's private collection. Many of Pike's personal effects are here as well. The Robert Burns Library is one of the finest and most complete collections of Scotland and Freemasonry's bard. Other spe-

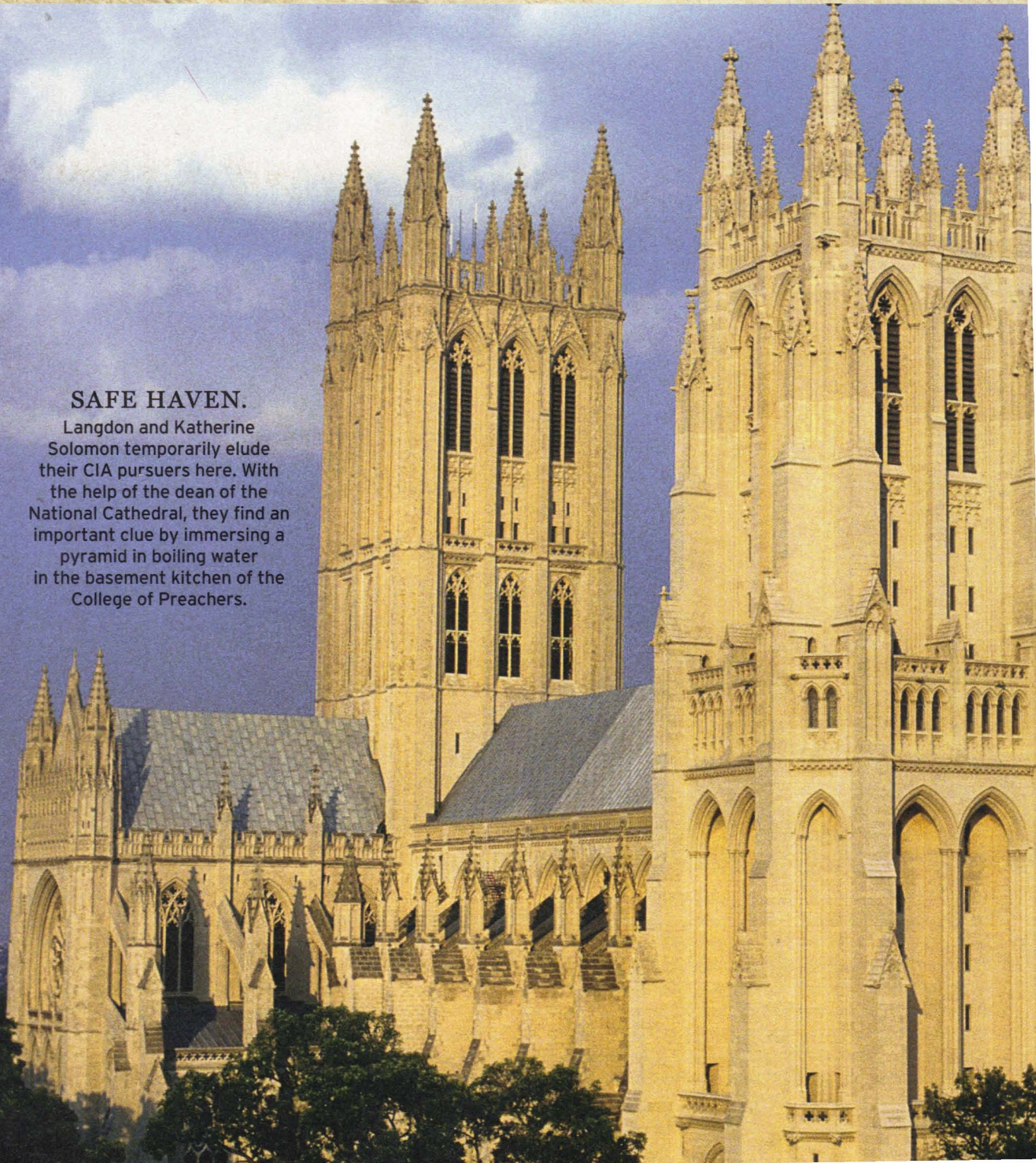
cialized holdings include private collections of Abraham Lincoln material, esoteric literature, and the works of Johann Wolfgang von Goethe. The temple's library is the oldest one open to the public in the District of Columbia, and today it contains more than 250,000 volumes.

Curiously, the number of the building, 1733, is not the proper address. It was created with the help of the U.S. Post Office to interject the symbolism of 33, long considered sacred within Christianity for several reasons: The multiple

use of three signifies the Holy Trinity; Christ was 33 years old when he ascended into heaven, and the gospels list 33 miracles performed by Christ. Many Christians use the number 3 or 33 in their symbolism. Thirty-three also appears in the Old Testament and other Jewish writings, and the Seal of Solomon, or Star of David, made up of two intersecting triangles, is considered a graphic representation of 3+3. It also plays a prominent role in kabbalah. The religions of Islam, Zoroastrianism, Buddhism, and Hinduism all associate sa-

SAFE HAVEN.

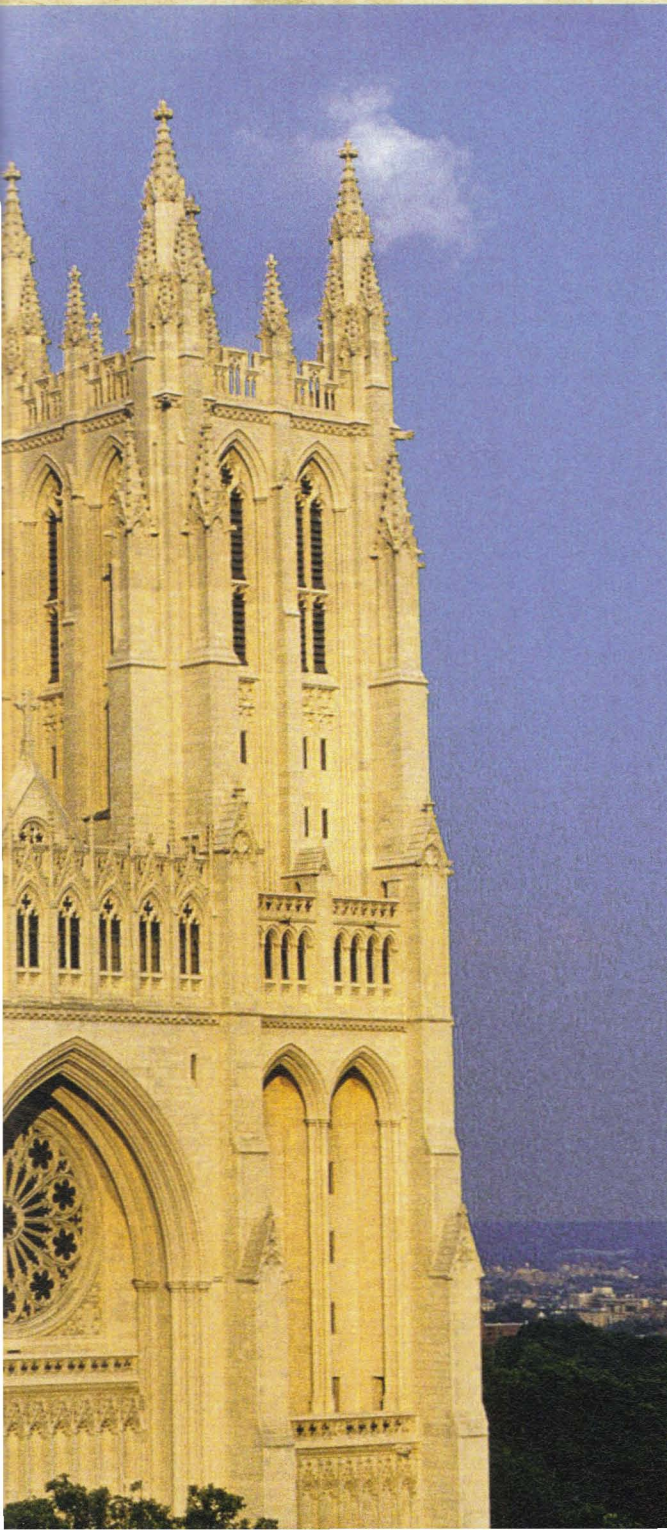
Langdon and Katherine Solomon temporarily elude their CIA pursuers here. With the help of the dean of the National Cathedral, they find an important clue by immersing a pyramid in boiling water in the basement kitchen of the College of Preachers.



cred meanings with the number 33. Therefore, it appears in the Scottish rite as a symbol of the fraternity's universality as well as the perfection that every man should aspire to achieve in his soul.

WASHINGTON NATIONAL CATHEDRAL

The L'Enfant plan of the federal city included a prominent place for a great church "intended for national purposes, such as public prayer, thanksgiving, funeral orations, etc., and as-



signed in the special use of no particular Sect or denomination" but "equally open to all." It was to be at the intersection of Eighth Street and Pennsylvania Avenue, between Congress and the President's House, where both could derive spiritual inspiration from it.

The great church of L'Enfant's plan was never constructed, at least not where he wanted it. The National Cathedral was not begun until 1907 and took nearly a century to construct. In spite of the government support that its name might imply, it is an Episcopal church, built with private donations.

It sits on Mount St. Alban, one of the highest spots in the northwest area of the District of Columbia, and may well be the last Gothic cathedral ever built in the world using the medieval styles and forms. No steel was used to reinforce it, and nothing was mass produced. It is the sixth-largest cathedral in the world. Many gargoyles and grotesques adorn its arches, spires, and crevices. It has been the location for state funerals as well as a place of national mourning, hosting events such as the prayer service after the 9/11 attacks.

No such place would be complete without an obligatory statue of George Washington. Washington stands dressed in a long coat—his Sunday best—respectfully holding his hat in his hand. On the wall behind the president are medallions depicting symbols of Freemasonry: a gavel, a square, and a compass.

THE WASHINGTON MONUMENT

Washington was cold in his tomb a total of eight days before Congress lumbered into action in December of 1799. Freemason John Marshall moved that a marble monument be erected to him and that his family be requested to relocate his remains into it once completed. The president had been buried in a tomb at Mount Vernon according to his last wishes, and the family resisted repeated attempts to have him moved, no matter how big a tomb was proposed out on the Mall.

Congress continued to do what it does best, proposing, studying, and rejecting several different plans for a monument to Washington over the next three decades. A committee formed in 1800 had suggested a tomb shaped like an enormous pyramid, echoing the unfinished pyramid on the reverse of the Great Seal of the United States. Ideas continued to come in, many of them incorporating pyramids or other Egyptian-themed elements, including Freemason Robert Mill's plan for a huge circular temple topped by an Egyptian obelisk.

Finally, a group of private citizens formed the Washington National Monument Society in 1833, to both create a design and raise money for its construction.

It took an additional 12 years for the society's members to collect \$87,000, but it was enough for Congress to take them seriously and grant them the 37-acre plot of land L'Enfant had put in his plan.

The obelisk, a design first fashioned by the ancient Egyptians, is thought to have been inspired by the rays of the sun. Most ancient Egyptian obelisks were dedicated to the sun god Ra. The Romans were fascinated by them, and many of the Egyptian originals were carried off to Rome. One stands prominently in St. Peter's Square in front of the Vatican.

The cornerstone for the monument was laid on the Fourth of July in 1848, 65 years after Congress had first adopted the

A CONFEDERATE IN THE ATTIC

Albert Pike has a bit part in *The Lost Symbol* but a big—and controversial—role as the inspirational leader of Southern Scottish Rite Freemasonry

A statue at Third and D streets NW in Judiciary Square depicts a man most Americans have never heard of, unless they are Freemasons or lovers of conspiracy theories. Albert Pike was the supreme commander of the Ancient and Accepted Scottish Rite Southern Jurisdiction for 32 years. He was a lawyer, an author, an esoteric scholar of ancient religions and philosophies, and an early champion of American Indian rights. His is the only outdoor statue within Washington of a Confederate officer. Pike briefly served in the Confederate Army as a general, notably at the Battle of Pea Ridge, where he commanded Confederate Indian troops.

The bronze statue was sculpted by Gaetano Trentanove and was erected in 1898 by authorization of Congress. Pike is dressed not as a Southern general but as a civilian and a Masonic leader. A Grecian woman at the base below him holds a Scottish rite banner, and Pike holds a copy of his book *Morals and Dogma* in his hand.

The reason Pike stands here is because this was a former location of the Scottish rite's headquarters, the House of the Temple. Pike lived in the building for many years and died there in 1891. Today, Pike's body is actually interred in the present House of the Temple on 16th Street.

Controversies have arisen over the years concerning Pike's statue. Despite a lack of evidence, it has been alleged that Albert Pike was grand dragon of the Arkansas Ku Klux Klan, originator of its rituals and its chief judicial officer. Even with an extensive congressional investigation of the Klan between 1868 and 1871, Pike's name was never mentioned, and there has never been any real proof of his involvement. Still, books published after his death praising the Klan claim he was a member. It is true that after the war, his writings speak of Southern "brotherhood" and a desire to keep blacks and whites separated socially. Pike clearly had conflicting views of race relations: He was opposed to secession before the war but fought for the South. He was not pro-slavery, yet he owned slaves.

—C.H.



idea. Benjamin B. French, grand master of the Grand Lodge of Washington, D.C., approached the stone wearing George Washington's Masonic sash and apron and used Washington's gavel to set the cornerstone. Curiously enough, that cornerstone has long ago been lost, buried within the 15-foot-thick granite walls of the monument's base.

Construction completely stopped in 1861, leaving the 176-foot stump looking "like a hollow, oversized chimney," to quote Freemason Mark Twain. During the Civil War, the area around the monument became a cattle yard and slaughterhouse to supply provisions for Union troops.

In 1876, with the war over and the centennial of the Declaration of Independence approaching, Congress finally appropriated \$2 million to finish the job. The base was found to be insufficient for the weight of the completed structure and had to be modified before it could rise farther. And there was still that pantheon to be built.

A lawyer named George Peter Marsh finally brought people to their senses. As the U.S. minister to Italy, he had made a study of the art of obelisks. His recommendation was to scrap the pantheon, columns, and statuary of Mill's original design and concentrate on just the elegant obelisk. Work began anew. The foundation was enlarged, hiding the cornerstone forever, and the obelisk began to rise.


In 1851 and 1853, the original Monument Society had solicited contributions from the Freemasons nationally through the Grand Lodges, knowing the fraternity's long association with the president. The call went out again in 1874, and pledges were received from Masons all over the country, as well as from non-Masonic fraternal bodies like the Odd Fellows, Knights of Pythias, and Improved Order of Red Men. In 1875, more than 200 Masonic lodges across the country responded to the appeal.

By 1884, the main body of the monument was completed. The difference in the age and quarry source of the marble can still be seen at the 155-foot level today, marked by a slight variation in color.

Before being delivered to Washington, the aluminum capstone was displayed in Tiffany's in New York. At the time, aluminum was an extremely rare metal, as expensive as silver but more durable. It was inscribed with the Latin words *Laus Deo*, Meaning "Praise be to God," on one side. The other three contain details of the construction and men involved. The capstone of this monument was no occult symbol, but an image of God watching over and guiding the nation.

Because the original cornerstone had been buried, the aluminum capstone was a replacement. It was hoisted to the top of the 555-foot tower—in 60-mph winds—and set into place on Dec. 6, 1884, 101 years after Congress proposed it.

From Solomon's Builders: Freemasons, Founding Fathers and the Secrets of Washington, D.C. Copyright © 2007 by Christopher Hodapp, author of Deciphering the Lost Symbol. Published by Ulysses Press.



**THE SECRET LIES
BURIED HERE.**

At the end of the novel, Robert Langdon learns the surprising news that the lost symbol is actually a word: the Logos, or God's wisdom. It may be found in the Bible, one of the sacred texts of Freemasonry, which was hidden long ago in the cornerstone of the Washington Monument, located deep below the surface of the earth.



**OFFICIAL
PORTRAIT.**

George
Washington as
a master Mason
by E. G. Leutze

America's Masonic Past

ONCE A CLUB FOR ENLIGHTENED EUROPEAN ARISTOCRATS, FREEMASONRY PLAYED A CRUCIAL ROLE IN THE EARLY YEARS OF AMERICAN DEMOCRACY

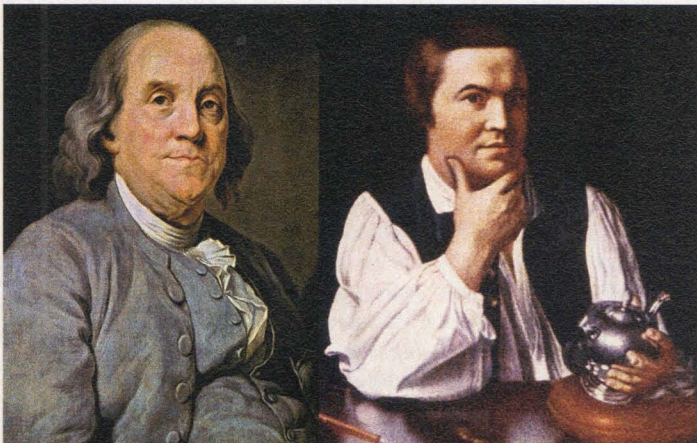
Long the subject of conspiracy theories and imagined skulduggery, Freemasonry—with its occult rituals and rich iconography—is at the very heart of *The Lost Symbol*. Because many Masons since the country's founding have been stalwart members of the American Establishment, Dan Brown hints at a powerful connection between founders and Masons. Brown's characters are moving at such a frantic pace, however, that Freemasonry's role in the birth of the nation is never fully explored, nor is its continuing influence on our history and civic traditions.

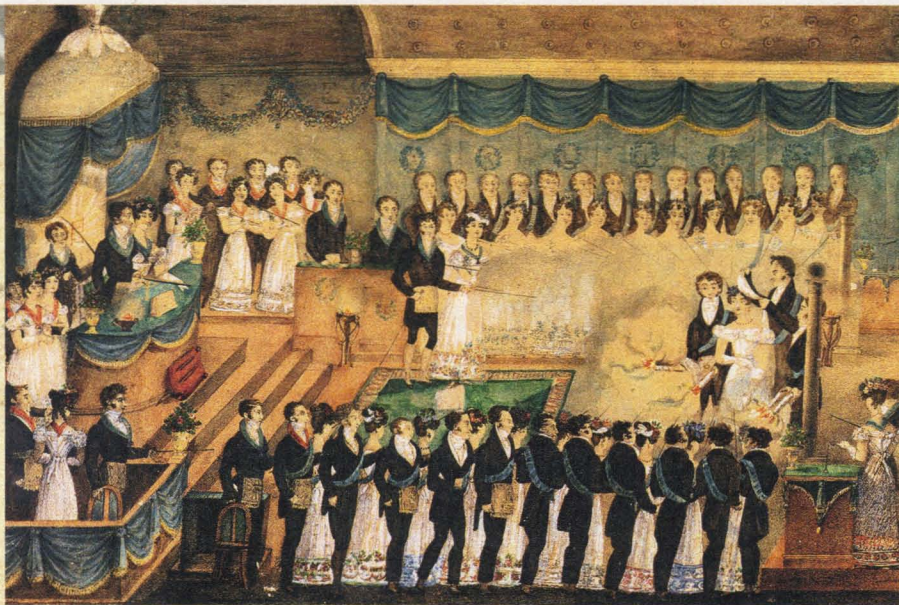
An ancient fraternal order, Freemasonry traces its origins to a European medieval craft guild for stone laborers. In the late 17th century, it was transformed into an organization of British noblemen who met to discuss philosophy. The members became known as "speculative Freemasons." After the formation of the first Grand Lodge in London in 1717, Freemasonry spread rapidly, attracting brothers from across Europe and as far as the United States.

The first Masonic lodge in America to receive a charter was St. John's Lodge in Boston, in 1733. More

were set up in other colonies, eventually counting as members four prominent early Americans: Benjamin Franklin, George Washington, Paul Revere, and Prince Hall. Here, historian **Mark A. Tabbert**, a Mason himself, describes how American Freemasons helped establish America's democracy and build many of its enduring civic institutions.

MASONIC BROTHERS. Benjamin Franklin (far left) and the coin (above) he helped design for the U.S. Mint; Paul Revere (left)





WOMEN'S INITIATION.

At left, a view of a 19th-century rite; the insignia of the Eastern Star (below)

are associated with five biblical heroines: Adah, Ruth, Esther, Martha, and Electa. While it is easy to see why a five-pointed star was chosen, it is harder to understand why it was an inverted pentagram, considering the satanic connotations often attributed to this symbol. The explanation given is that the inverted pentagram represents the star of Bethlehem. Indeed, it would appear to be the reason for the order's name, considering the OED motto, "We have seen his star in the East, and are come to worship him" (Matthew 2:2).

However, some commentators have noted that the Eastern star could not be the star of Bethlehem, which is traditionally represented as six-pointed. They contend that, based on ancient Egyptian texts and iconography, a five-pointed star related specifically to the star Sirius. Others have noted that the inverted pentagram is closely associated with Baphomet. Biblical scholar and author Hugh Schonfield has shown that by employing the sixth-century B.C. Atbash cipher, the name *Baphomet* becomes *Sophia*—Greek for *wisdom*, and closely linked to the sacred feminine. —*Simon Cox*

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WOMEN WERE MEMBERS, TOO

Is Inoue Sato, the tough-talking CIA chief in *The Lost Symbol*, a Freemason? Dan Brown never really says, adding yet another layer of mystery to his thriller. But what is clear is that women have been Masons for at least 150 years.

Unlike Freemasonry, its more famous counterpart, the Order of the Eastern Star and its Masonic links are relatively unknown by the general public. While it is true that the majority of members are women, the OES is open to men and has both a worthy matron and worthy patron as its highest officers. Its international headquarters is located in Washington, D.C., and there are some 10,000 chapters in 20 countries, claiming 1 million members worldwide.

To join the OES, one must be a Mason or a female relative of a Mason: wife, daughter, niece, stepmother, sister-in-law, or mother-in-law, for example. Or women can join directly if they have belonged to the International Order of Job's Daughters and International Order of the Rainbow for Girls, a Masons-sponsored youth organization for girls, once they turn 18.

People of all faiths who believe in a Supreme Being (atheists are not allowed to join) and wish to advance the well-being of others are accepted. Its central tenets and lessons taught through the degrees are fidelity, constancy, loyalty, faith, and love. Members raise a great deal of money for their local community and international charities.

There are some who claim that the OES was founded in France as early as 1703, though that remains uncertain. But what is certain is that Rob Morris, an American lawyer and master Mason, developed the Eastern Star degrees in 1850 to enable women to join a Masonic fraternity. Morris wrote the ritual for the order, published in 1865 under the title *The Rosary of the Eastern Star*, detailing the degrees of the order and its names, signs, symbols, colors, and principles. The symbols' and emblems' deeper meanings are guarded closely by the order. These symbols



Born into a humble yet respectable artisan family in Boston, Benjamin Franklin was a printer, scientist, inventor, politician, diplomat, and sage. His migration from Boston to Philadelphia and quick rise to the highest social, intellectual, and political circles remains a model for the American dream. As part of this ascent, Franklin joined a Masonic lodge in Philadelphia that comprised the most influential men in the Pennsylvania Colony and published the first Masonic book in America in 1734. He was elected provincial grand master of the Grand Lodge of Pennsylvania in 1734 and in 1755 participated in the dedication of America's first Masonic Hall in Philadelphia.

In the view of historian Steven C. Bullock, Franklin and the emerging urban upper class he sought to enter saw Freemasonry in the 1730s and 1740s as "a means both to build elite solidarity and to emphasize their elevation above common people." Philadelphia Masons became less interested in the spiritual and intellectual elements of the ritual and more concerned with the honorable and paternalistic virtues of the craft. Like the English aristocracy, Franklin and his peers viewed the fraternity as a means to create and endow city institutions that would earn them public honor and social respect. Franklin established a library, a fire company, a college (later known as the University of Pennsylvania), an insurance company, and a hospital.

Unlike Franklin, George Washington was born into a leading Virginia family. As a young man in 1752, he became a Mason in a lodge at Fredericksburg, Va. Washington served as an officer in the militia and fought the French in western Pennsylvania during the French and Indian Wars. In 1758, he was elected to Virginia's House of Burgesses. A year later, he married the wealthy widow Martha Custis and settled down as a respected landowner, retired soldier, representative in the House of Burgesses, and member of the vestry of his church.

Washington's Masonic membership, like his public titles, was part of a range of necessary duties expected from a man of his social status and political influence. The fact that he probably did not attend any Masonic meetings between 1755 and 1777 does not diminish his regard for the fraternity any more than his sporadic attendance at his church could be considered a lack of personal faith.

Within Washington's Southern society, family lineage and public obligations were paramount. Masonic membership was restricted to the colony's most honorable and respected gentlemen. While emphasis within the lodge room might be devoted to improving a man and creating equality among the members, that same Masonic brotherhood was, in practice, not extended to society as a whole.

Poorer and socially less prominent than either Franklin or Washington, Paul Revere spent his entire life in Massachusetts. The family circumstances



PRINCE HALL FREEMASONS.

The founder himself (at top); members of the Carthaginian Lodge in 1907 (pictured below)

of this artisan's son limited his prospects in the society of colonial Boston, even though Revere was recognized as a highly talented silversmith and a trustworthy businessman. Revere became a Mason in 1760 in Boston's Lodge of St. Andrew. He served first as the lodge secretary and went on to become a master. In 1794, he rose to become grand master of the Massachusetts Grand Lodge. During his three-year term, Revere nearly doubled the number of chartered lodges in Massachusetts.

Revere considered his participation in the Masonic community to be a step toward both self-improvement and social advancement. He and other men like him learned the art of rhetoric and public speaking through the recitation of Masonic rituals and lectures. To Revere and his middle-class community, the fraternity also provided the skills and status they sought to associate with Franklin's

RIDING HIGH.

Built in the 1890s, this Masonic temple was the tallest building in Chicago.

and Washington's society and the membership of the more elite St. John's Lodge.

While the craft declared a universal brotherhood, its members often denied access to individuals they did not view as their social equals. This paradox was demonstrated when Prince Hall became a Mason in 1775. Little is known about Hall's life, but he was probably born into slavery, received his freedom from William Hall in 1770, and established a leather dressing shop in Boston. He was active in his church and supported a school and a benevolent society in his African-American community. A clergyman would later call Prince Hall "the leading African in Boston."

On March 6, 1775, during the British embargo and occupation of Boston, Hall and 14 other black men were initiated into the craft by Lodge No. 441, a Boston military lodge attached to the 38th Regiment of Foot. Hall and his Masonic brothers later formed their own lodge, which continued to meet throughout the American Revolution. By 1784, these black Masons received a charter from the "Modern" Grand Lodge in England to meet as



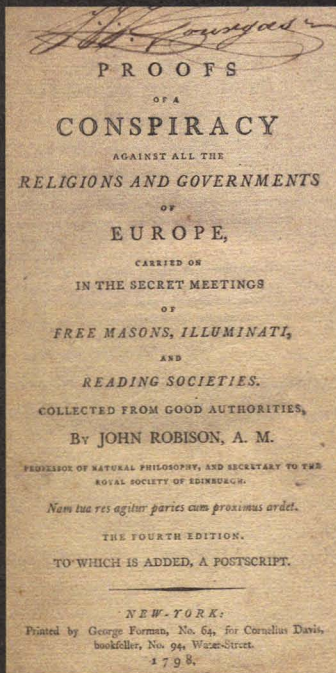
African Lodge No. 459. Hall served as its first master and went on to charter other African-American lodges in Philadelphia and in Rhode Island. Among the members in Philadelphia were Absalom Jones, the first black Episcopal minister in America; Richard Allen, the first bishop of the African Methodist Episcopal Church, and most of the founders of the Free African Society. After the death of Hall in 1807, African-American Masons chose to call their organization "Prince Hall Freemasonry" in honor of their founder.

Like Revere and his middle-class whites, Hall and his colleagues used their affiliation with the fraternity to improve themselves while providing relief and charity to their community. At the time of the American Revolution, Boston's entire African-American population numbered approximately 600. This segregated community included African slaves as well as freemen like Hall, who owned property and voted in state elections. Hall's Masonic lodge was a means to designate the "better sort" among Boston's black population and to allow its members to claim a brotherly association with other Masons. Most important, within a society that viewed them with a considerable amount of prejudice, the lodge served as a legitimate

and acceptable means for African-Americans to meet, organize, educate, and help one another without white involvement or permission.

DIATRIBE. A pamphlet dating from the end of the 18th century that denounces Freemasonry

THE ANTI-MASONIC BACKLASH



Freemasonry's success in 18th-century America was due mainly to the fact that its tenets and virtues were in harmony with the Enlightenment culture of the age, but its revolutionary honor and prestige also came at a price. Since the rebellion was fomented by secret, extralegal organizations such as the Sons of Liberty—and many well-known Freemasons were deeply involved—and because Masonic lodges met in private and used secret recognition signs and words, many citizens did not distinguish between Freemasonry and the Sons of Liberty. As the violent French Revolution engulfed Europe in the 1790s, Freemasonry's reputation as a conspiratorial organization took on a different hue among Americans, while the memory of the Founding Fathers' Masonic affiliations diminished. By the 1820s, Freemasonry was perceived as a dangerous international secret society whose members masked their malevolent plots behind the facades of false charity and General Washington's reputation. —M.A.T.

THE AMERICAN REVOLUTION

The American Revolution in 1775 transformed colonial Masonic lodges no less than it transformed the communities in which they existed. Owing to the turbulence of the times, it is not surprising that many of the nearly 100 lodges in the Colonies suspended meetings. Lodges with more "rebellious" memberships, however, were more likely to be among those that remained active.

Among the delegates from the Colonies who met as a Continental Congress in Philadelphia in 1776 to consider and vote on a Declaration of Independence, nine of the 56 signers are known to have been Masons. Some Masonic historians have claimed a higher number, yet it is still significant

that men from different colonies—such as John Hancock of Massachusetts, Richard Stockton of New Jersey, and George Walton of Georgia—could recognize one another as fraternal brothers.

As acts of rebellion became a war for independence, George Washington received command of the Continental Army. One of Washington's greatest challenges was to unite colonial regiments composed of men with varied levels of skill and bravery, and Freemasonry became an important means of meeting this challenge. Taking the tradition from British regiments, the American regiments formed military lodges. The best known of these lodges was the American Union Lodge. Organized within a Connecticut regiment during the siege of Boston and chartered by a Massachusetts provincial grand lodge, it operated throughout the war.

The officers of regimental lodges invited brother Masons from different colonies to their meetings and social gatherings. The craft served as a point of introduction among strangers. Freemasonry's solemn obligations also reinforced loyalty to one another and to the American cause; even foreign officers who were Freemasons—such as France's Marquis de Lafayette and Germany's Baron von Steuben—joined the patriots' cause. Lodge meetings, especially during winter encampments, provided social activities and fellowship that boosted morale while offering charity to wounded and imprisoned brothers or to the families of fellow Masons who were killed.

Freemasonry's fraternal spirit appealed to Continental Army officers. Its orderly rituals and hierarchy helped unite them as friends and brothers. Military rank during this period was usually granted according to a man's social status. Since many of the highest-class colonists remained loyal to the crown, service in the Continental Army and membership in the Masonic fraternity elevated aspiring gentlemen. By the war's end, hundreds of officers had become Masons in the 10 or more regimental lodges, and at least 33 of the Continental Army's 78 generals were Freemasons.

While Washington commanded the Continental Army, Franklin, Revere, and Hall all found their own way to serve the Revolutionary cause. Franklin was sent to Paris to persuade France to aid the rebellion. While there, he renewed his interest in Freemasonry and joined the pre-eminent French lodge, the Loge des Neuf Soeurs. He served as its master and participated in the Masonic initiation of Voltaire in 1778. Along with securing French support, Franklin met the young aristocrat and brother Mason Marquis de Lafayette, and assisted him on his journey to America in 1780. Revere remained in Massachusetts, where he served as an artillery officer, made gunpowder, and



MEMBERS OF THE CRAFT.

Of the first 16 American presidents, five were Freemasons: Washington, Monroe, Jackson, Polk, and Buchanan.

cast cannons for the Continental Army. Little is known about Hall's activities during the war, but he did make leather drumheads for a Massachusetts regiment and organized petitions to the Massachusetts legislature seeking to abolish slavery.

THE DEMOCRATIC EXPERIMENT

The movement toward American independence that had begun in revolution led eventually to the ratification of the U.S. Constitution in 1789. Masons played a prominent role in this process. Nine of the 48 signers of the Articles of Confederation were Freemasons, as were 13 of 39 signers of the Constitution. Several Freemasons accepted major positions in all branches of government for the new nation. George Washington received the presidential oath of office on a Bible borrowed from New York City's St. John's Lodge No. 1. Freemason John A. C. Muhlenberg was elected the first speaker of the U.S. House of Representatives, and Freemasons John J. Blair and William Cushing were among the first justices of the U.S. Supreme Court.

Freemasonry's prestige and social acceptance reached a pinnacle when the cornerstone for the U.S.

Capitol was laid in 1793. Wearing Masonic regalia, President Washington led a procession to the top of Capitol Hill. During the Masonic ceremony, the stone was tried by the plumb, level, and square and was symbolically blessed with corn (representing plenty), wine (happiness), and oil (peace). Using a Masonic trowel, Washington spread the symbolic cement of the brotherly love that would both unite the building into one common mass and bring all Americans together as one common people.

FEDERALIST AMERICA

Following George Washington's death in 1799, Freemasonry continued to flourish as the United States grew. The Louisiana Purchase of 1803 extended the nation's territory westward to the Rocky Mountains. The War of 1812 with Great Britain confirmed America's independence and strengthened national unity. Between 1800 and 1826, eight new states joined the union, and the nation's population more than doubled from 5 million to nearly 11 million.

During this period of rapid national growth, Freemasons played a prominent role in nearly every segment of American society. John Marshall, a past grand master of Virginia, was appointed chief justice of the Supreme Court in 1801. Masonic brothers Meriwether Lewis and William Clark set off from St. Louis in 1804 on a two-year voyage of discovery to the Pacific Coast. Masons Stephen Decatur and Winfield Scott were among those who fought in the War of 1812. Stephen Austin became the "father of Texas." Gov. DeWitt Clinton, who was also

grand master of New York, helped to build the Erie Canal in the 1820s. Andrew Jackson was the first president who had previously served as a Masonic grand master of his home state.

Throughout America's federalist period, Freemasonry remained an important means for men to meet across social divides. Between the 1790s and 1820s, Freemasonry, wedded to republican virtues and sectarian toleration, found a societal niche as the "civic religion" of the United States. Its symbols of virtue and equality adorned furniture and furnishings in many American homes. Masonic lodges were called upon to lay cornerstones of public buildings and to participate in patriotic holiday parades. Citizens viewed the fraternity's local lodges and its limited centralized power as excellent reflections of American republicanism and Jeffersonian democracy. Between 1800 and 1822, the number of Masons increased from 16,000 to a con-

servative estimate of 80,000, or approximately 5 percent of the eligible male population. In 1800, there were 347 local lodges nationwide, and by 1825, there were 500 lodges in New York alone. Free African-Americans also expanded Prince Hall Freemasonry and took the craft with them when they went to Africa to assist in founding the nation of Liberia.

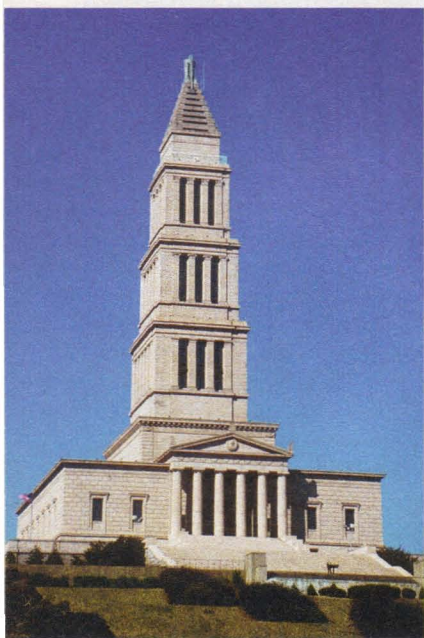
As a voluntary association, Freemasonry conformed to the customs of a community. While government, religion, and education worked for social order through the law, the Bible, or children's primers, Freemasonry's rituals encouraged private harmony between lodge brethren; and the honors a man earned in Freemasonry never superseded his public achievements. As the nation grew and became increasingly divided, Freemasonry's future ultimately depended on the high reputation and rational action of its members.

•••

Because of the political and social prominence of many of its members—and because its rites and teachings were shrouded in secrecy—American Freemasonry was particularly vulnerable to criticism. As a result, Tabbert points out, when public perceptions of the organization were becoming more negative in the first decades of the 19th century (box, Page 24), it took just one major scandal to send it into a tailspin. The tipping point came in 1826 when some local Masons abducted and likely killed Capt. William Morgan, who had threatened to publish an exposé of Masonic rituals and recognition signs. What actually happened is unknown, but his disappearance set off a virulent anti-Masonic backlash, which decimated the fraternity—decreasing its numbers by 60 percent.

Despite these setbacks, Freemasonry continued its charitable works, rebuilding its prestige to such a degree that in just a few decades a new "Golden Age of fraternalism" began. This lasted, says Tabbert, from the mid-1800s into the first decades of the 20th century, culminating in the construction of the colossal, 333-foot-high George Washington National Masonic Memorial in Alexandria, Va. President Calvin Coolidge and Chief Justice William Taft led the 1923 cornerstone dedication, attended by thousands of Freemasons. Even after its heyday had ended, the craft continued to attract powerful Establishment members all through the 20th century, including several presidents and Supreme Court justices (photo spread, Page 27). And now, in the opening years of the 21st century, this ancient, benevolent fraternity may yet be poised to rise again.

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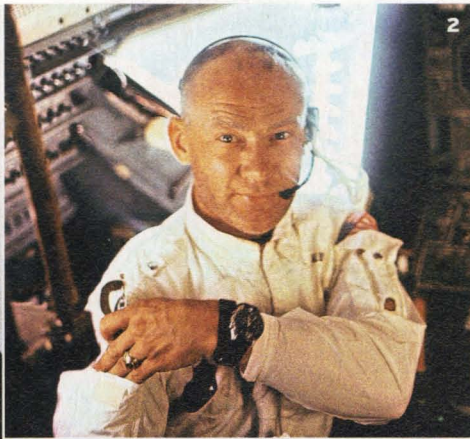


PINNACLE OF POWER.

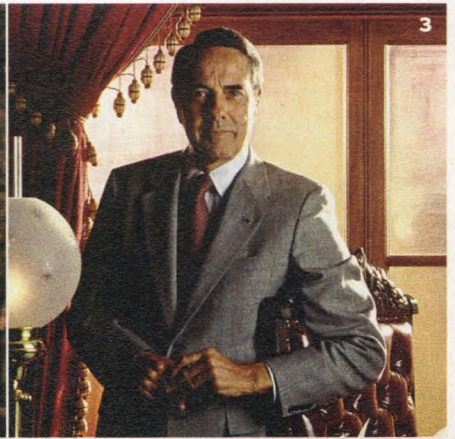
The dedication of the George Washington National Masonic Monument was a high point for the craft.



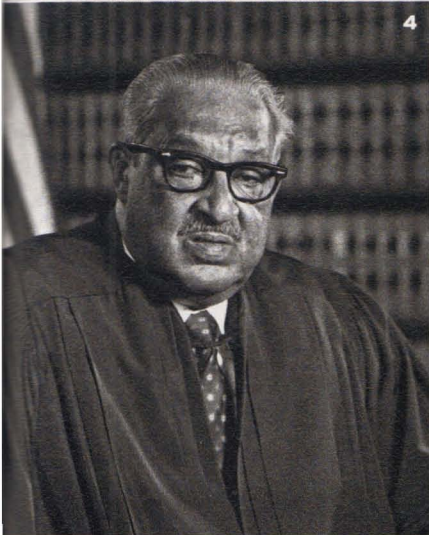
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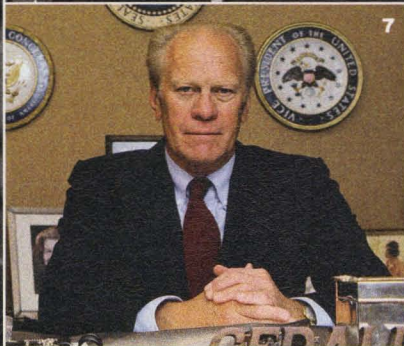
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20TH-CENTURY MASONS.

1. Musician Duke Ellington, 2. Astronaut Buzz Aldrin, 3. Sen. Bob Dole, 4. Supreme Court Justice Thurgood Marshall, 5. FBI Director J. Edgar Hoover, 6 & 7. Presidents Harry Truman and Gerald Ford, 8. Carmaker Henry Ford, 9. Composer Irving Berlin

DID DAN BROWN GET THE RITES RIGHT?

Arturo de Hoyos, a 33rd-degree Mason and an author, editor, and translator of more than 25 books and many articles on Freemasonry, is considered one of America's foremost Masonic scholars. Here, he gives his opinion of Dan Brown's take on Masonic rituals.



Do you feel that Brown's depiction of Masonic rites in *The Lost Symbol* is accurate?

Some of Brown's descriptions are accurate, but other parts are not. For example, the 33rd-degree ritual in the prologue is not correct. His source is a group that claimed to be the Scottish rite and copied the names of our degrees. His other descriptions are partially based on rituals practiced in England, which differ substantially. **How does one ascend from degree to degree? What is the importance of the 33rd?**

Masonic degrees are "levels of membership" (think of the Boy Scouts: Tenderfoot, Second Class, First Class, etc.). Progression between the first three degrees usually requires the memorization of a type of catechism, which teaches members about our ritual and symbolism. Some lodges also require that papers be delivered that demonstrate the member's understanding of Masonry. The 33rd degree is simply the last degree in the Scottish

rite. It is given as an honor for faithful service, and cannot be applied for, or purchased, as was done in *The Lost Symbol*. It is a common mistake to believe that 33rd-degree Masons have more "authority" in local lodges than a third-degree master Mason. The importance of the 33rd degree lies only within the Scottish rite.

Mal'akh, the villain in the book, tapes his initiation ceremonies in hopes of releasing the video to the media and creating widespread chaos. The video includes "pressing a shining dagger to the initiate's bare chest" and threats of having "one's throat cut across, one's tongue torn out by the roots, and one's body buried in the rough sands of the sea" should the initiate violate trust. Is any of this accurate?

Freemasons, like me, are obligated to maintain a moral code of honor. When asked for detailed descriptions of Masonic ritual, I decline to answer. By analogy, married couples will not discuss their private relations with other people. You may read about the so-called secrets of Freemasonry as easily as you can read about intimate relations, but, as I said, an honorable person doesn't share these things with others. However, the language of the "symbolic penalties" described above reminds me of New Testament language: "If your right eye offends you, [then] cut it off and throw it from you ... If your right hand offends you, [then] cut it off and throw it ..." (Matthew 5:29-30). Obviously, this is a bit of hyperbole.

What about the "death ritual" depicting the initiate's simulated murder? Is he indeed laid in a symbolic coffin? Does he drink from a skull for "the fifth libation"? Is there a sacrificial altar in Masonic rituals, and do any of them have a connection with Abraham's sacrifice of Isaac?

Again, I decline to respond to ritual questions in detail, but I will say that a Masonic legend describes the death

of the architect of Solomon's Temple, Hiram Abiff. The Scottish rite does not have a "fifth libation," nor do candidates to the 33rd degree drink wine (or anything else) from skulls. Masonic lodges do have altars, upon which rest the Holy Scriptures, but no "sacrifices" are made thereon, other than symbolically sacrificing one's baser passions for self-improvement. The story related to Abraham's intended sacrifice of Isaac is not a part of American Masonry.

Do you believe that an interloper, like the character Mal'akh in Brown's book, could successfully penetrate the group? Is the story of William Morgan true?

I believe that clever and deceitful people can infiltrate almost any group. Consider, for example, FBI traitor Robert P. Hanssen, who successfully betrayed our country for 20 years. I'm sure Freemasonry has had dishonest people join, just as there are corporate



SACRIFICE. An angel stays Abraham's hand

spies, conmen, and people who marry for money.

The story of William Morgan is quite interesting. In 1826 in Batavia, N.Y., Morgan disappeared after boasting that he was preparing a book to unveil the “secrets” of Freemasonry. There is no evidence that he was ever initiated a Mason, but he was able to bluff his way into the lodges. He was apparently abducted by some local Masons and was never seen again. This story emphasizes how easily people do foolish things for the wrong reasons. I’m sure it’s neither the first nor last time people will be misled by zeal.

Robert Langdon describes Masonic Chambers of Reflection as “cold, austere places in which a Mason can reflect on his own mortality.” Is this an accurate depiction?

I should first note that the Chamber of Reflection is a European notion, not American. Most American Masons have never seen one. They are not a place to which Masons retire in order to contemplate mysteries or to reflect on life. They are not found in homes or offices. That said, the depiction is fairly accurate. They are, for lack of a better term, a “prop,” which serves a symbolic purpose only, and that, only prior to initiation. The emblems of mortality—the scythe and the hourglass—remind us of the brevity of human life. The blank paper allows us to record our earnest thoughts in contemplation of mortality, and the salt and sulfur represent the body and spirit (or mind).

Would you call the Masons a secret society? Why must its secrets be kept? Is Dan Brown correct in saying that

the rest of society is not ready to know them?

I prefer to call Freemasonry the world’s oldest and largest fraternity, or “brotherhood.” We consider each other “brothers,” and we respect confidences, as family members do. The majority of our so-called secrets are symbolic secrets. Why is it important to keep secrets? Because it builds

trust. In Masonry, as in life, the “secret” shared by a “brother,” or a family member, or friend, is often far less important than knowing that you have someone in whom you can trust. That said, there are secrets of another order, which are private among members. But there is no deep, dark, ultimate secret of the nature described in *The Lost Symbol*. —Jen Doll



‘REMEMBER, MAN, THAT THOU ART DUST.’ A simulated Masonic Chamber of Reflection



The Accidental Donor

BRITISH SCIENTIST JAMES SMITHSON'S GIFT TO THE UNITED STATES BROUGHT HIM UNEXPECTED AND ENDURING FAME



The Smithsonian Institution plays a starring role in *The Lost Symbol*: Its secretary is taken hostage by Mal'akh, the thriller's evil genius, who then goes on a killing spree at the Smithsonian Museum Support Center and blows up one of its "pods." An equally riveting real-life story concerns James Smithson, the institution's founder. The illegitimate son of a British peer and an aristocrat, he was one of a cadre of well-heeled amateur scientists—which included Isaac Newton and Francis Bacon—who began to apply rational, scientific principles to all aspects of the natural world. Although he had never set foot in America, Smithson decided a few years before he died to make an important bequest to the United States. As a result, even though he never achieved fame for his scientific discoveries, says Smithson biographer **Heather Ewing**, his gift to promote "the increase and diffusion of knowledge" produced a stellar result: His name now adorns the world's largest scientific organization.

James Smithson knew many of the scientific greats of his era, the "Men," as he called them, "to whom it is given to make alone the progress of a century." But he was not apparently destined to enter that league himself. A lifetime dedicated to augmenting the store of natural knowledge had resulted in no groundbreaking discoveries. And now, in 1825, after living in Paris for more than 10 years, he was back in London, a city where it was much harder to ignore the family story that so preoccupied him. Hungerford Market, on the site of his maternal family's ancestral palace, sat cheek by jowl with Northumberland House at the head of the Strand, an inevitable reminder of his rich illicit parentage. This was to be, as he most likely knew, his last trip to England; it was time to organize his possessions and write his will.

For Smithson, no object was unworthy of study; he had analyzed his lead pencil, the Napoleon coin in his pocket, and the indelible green stain left by crushing a gnat on paper. No discovery was too minor to be shared. Some small observation could prove the missing ingredient, the unresolved question, in some other scientist's labors. Finding a better way of doing something translated into a saving of time, money, and resources. And it had ramifications for society as

a whole. "In all cases means of economy tend to augment and diffuse comforts and happiness," Smithson emphasized. "They bring within the reach of the many what wasteful proceedings confine to the few."

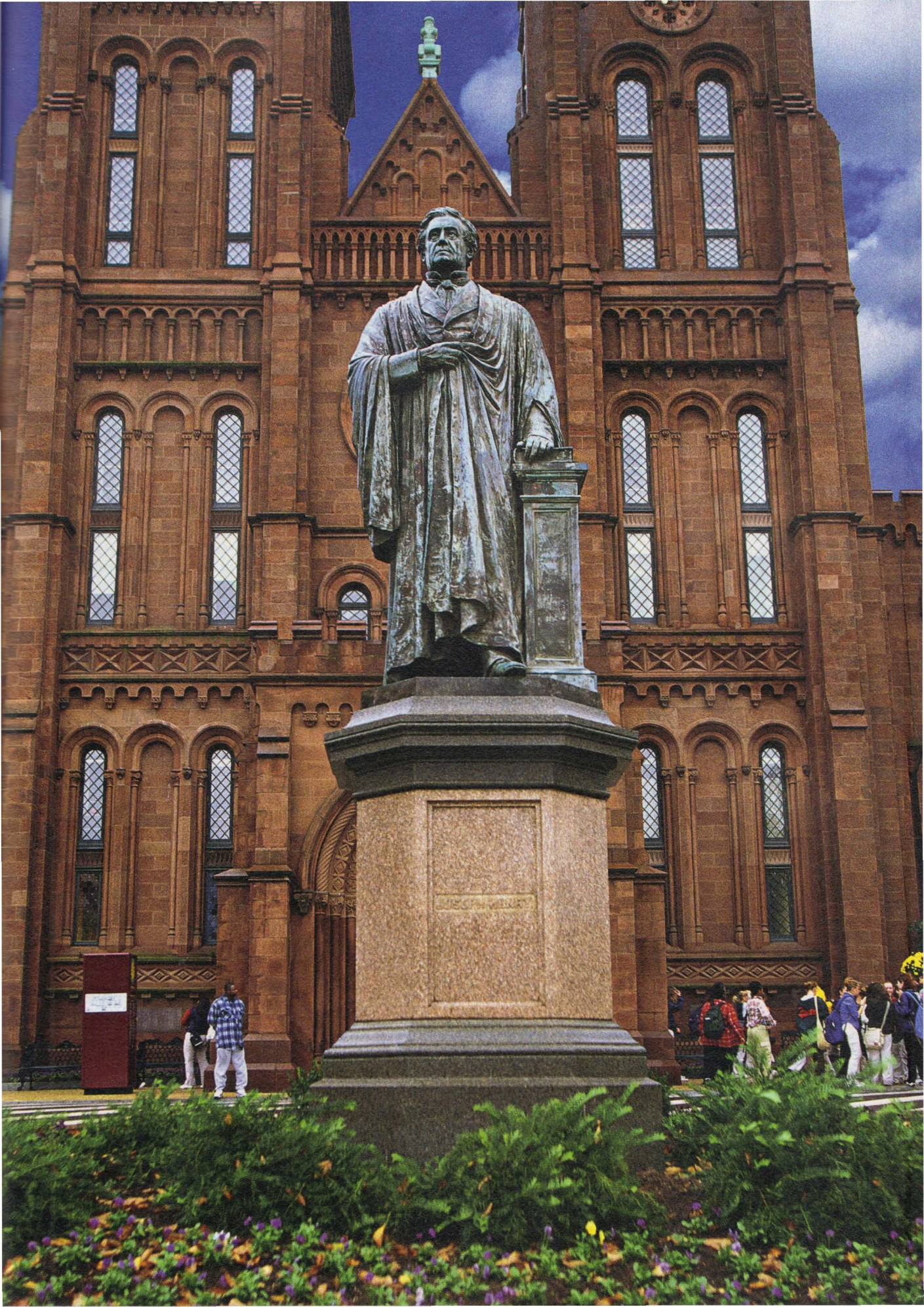
Smithson would have found on his return to London a group of reformers alight with such thinking. While the scientific establishment shunned the working classes, George Birkbeck, the head of the London Chemical Society, was determined to bring education to the masses. He launched the London Mechanics' Institution. It offered evening classes in chemistry, mathematics, and electricity; the program was phenomenally successful. By 1826, every large town in England and many small ones had mechanics' institutes.

The Society for the Diffusion of Useful Knowledge was also founded at this time, the brainchild of Birkbeck's friend and fellow Scot, the Whig reformer Henry Brougham. It had similar goals, seeing science—chemistry, in particular—as an essential subject in the dissemination of knowledge in society. "The pleasures of Science go hand in hand with the solid benefits derived from it," Brougham argued.

The year 1825 also marked the beginning of what came to be called University College, London. Like the Scottish universities—and in distinct contrast

SCIENCE ENTHUSIAST.

Founder James Smithson (above) and, at right, in front of his institution



'AMERICA'S ATTIC': THE ANNEX

One of the most surprising discoveries in *The Lost Symbol* is that the futuristic Smithsonian Museum Support Center really exists—and can be found, just as Dan Brown

says, at 4210 Silver Hill Road in Suitland, Md., about 6 miles outside Washington. This vast, 5-acre, climate-controlled complex has five football-field-size storage “pods” that house many of the Smithsonian’s research and conservation labs, as well as archives and collections from the Freer Gallery of Art, the National Museum of African Art, the National Museum of Natural History, and other museums. The “wet collections” in Pod 5 contain about 25 million specimens preserved in fluids. Unlike in Brown’s novel, however, no human bodies are floating in a tank meant for a giant squid. —Amy D. Bernstein



to Oxford and Cambridge—the university in London was open to all, regardless of religious beliefs. It signaled the first break in the tradition of elite channels, stressing the widening possibilities for all, and science featured prominently in the studies offered. The university quickly gained support from Brougham and other leading utilitarians.

It is likely that Smithson was aware of many or most of these developments. But he was not solicited to be a patron of any of these new ventures. If by chance Smithson was feeling underappreciated or overlooked by the London community of philanthropic reformers, perhaps he learned of the new quarter where his work was being well received and eagerly consumed. In 1825, the *American Journal of Arts & Sciences*, the leading scientific journal in the United States, reprinted Smithson’s “Method of fixing particles on the sapphire”—which was retitled simply “Blowpipe Experiments.” And in May 1826, the *Franklin Journal and American Mechanics’ Magazine*, based in Philadelphia, reprinted Smithson’s article on transforming the pastel portrait into an oil painting.

The United States over the preceding decades had slowly been developing its own native culture of science. Scientific societies, like the relatively long-standing American Philosophical Society in Philadelphia and the American Academy of Arts and Sciences in Boston, had been joined by a growing number of specialist departments at universities, as well as new scientific journals and literature. President John Quincy Adams had advocated the establishment of national institutions for the promotion of science: an astronomical observatory, a

national university, and an exploring expedition.

Even if Smithson had probably long had his eye fixed on the United States, Europe, by the 1820s, viewed America as the future. “Our countrymen do not believe that America is more advanced in knowledge and refinement than Europe,” the *Edinburgh Magazine* explained to its readers, “but they know that ... their generous transatlantic rivals start unencumbered by many old prejudices and social trammels which we cannot here escape from.” These opinions were ones that Smithson, who had spent a lifetime brooding over the disenfranchisement caused by the circumstances of his birth, had most likely mulled over for a very long while. Smithson’s will as he finally penned it is unique in the annals of testaments. Many of his contemporaries, the men of the English Enlightenment who had, like him, dedicated themselves to advancing the frontiers of knowledge, were also approaching the end of their lives in the 1820s, but none of them suggested a Smithsonian-like instrument for their wealth that would dramatically affect the direction of science or society.

Smithson’s last testament was a highly irregular document, its language strikingly informal and inexact. Defining one’s mother as “Elizabeth, heiress of the Hungerfords of Studley, & niece to Charles the proud Duke of Somerset,” with no last name, address, or other identifying details, invited challenges and problems in probate. This is not to say that 18th-century gentlemen did not write quirky wills. But in light of the size of the estate and Smithson’s unusual intentions for it, it is remarkable, not to say almost unprecedented, that he did not consult with a professional in the drafting of his will.

Smithson left all of his property in trust to his bankers, instructing them to put it under the management of the Court of Chancery. He remembered first of all his servants John Fitall and Henri Honoré Saily, leaving Fitall a £100 annuity and permitting Saily to keep the outstanding bills and bonds signed by Smithson for five years at an interest of 5 percent. He then specified that “To Henry James Hungerford, my Nephew, heretofore called Henry James Dickinson [sic], ... I give and bequeath for his life the whole of the income arising from my property of every nature & kind whatever” He empowered his nephew to make a jointure should he marry, ensuring that any wife might also be provided for. The whole of his property “of every kind absolutely & forever” was to go to any children that Hungerford might have.

Only then, after he had laid all of these instructions out, did he write, “In the case of the death of my said Nephew without leaving a child or children, or the death of the child or children he may have had under the age of twenty-one years or intestate, I then bequeath the whole of my property ... to the United States of America, to found at Washington, under

the name of the Smithsonian Institution, an Establishment for the increase & diffusion of knowledge among men." There was no further elaboration. Having written his will and tidied up his affairs, Smithson went back to Paris.

Smithson was still in Paris in the summer of 1828. At some point thereafter, he packed up his things and headed south to the Mediterranean, accompanied by his servant Herman Fropwell. He traveled across the Continent in grand style, in his own private carriage, carrying himself, as ever, as the English aristocrat. Smithson brought many things with him on this journey—books, papers, his telescope, a large collection of silver, two gold snuffboxes, many fine pieces of gold and diamond jewelry, and "two paste board boxes containing medal coins stones &c." Presumably, Smithson hoped to recuperate for a season or more along the coast somewhere. He settled for a while in Genoa, a sprawling amphitheater of a town perched high on the hills in Italy, with broad vistas out to the sea. It was there, at the end of June, that Smithson passed his final hours.

How did Smithson die? And what of, in the end? There is no record—only the knowledge that the English vice consul, summoned probably by Smithson's servant, hurried to the house that same day, June 27, 1829. He came with a Mr. Gibbs, an English agent resident in Genoa who had served as Smithson's banker. Together, the two men made arrangements for a funeral.

Davies Gilbert at the Royal Society had probably learned of the loss of his friend following the probate of Smithson's will. The *Times* observed it a week or so later, printing the will in its entirety and finally

bringing word of Smithson's extraordinary contingency bequest to light. The *Gentleman's Magazine* commemorated him in a few paragraphs in early 1830. Its obituary opened by quoting from the will Smithson's ostentatious description of his own family heritage: "Son to Hugh, first Duke of Northumberland, & Elizabeth, heiress of the Hungerfords of Studley & niece to Charles the proud Duke of Somerset." The editors immediately disparaged Smithson's ancestral claims, stating that "in the account of the family in Sir R. C. Hoare's *Hungerfordiana*, we find no Elizabeth, nor the name of Macie, which was that which Mr. Smithson originally bore."

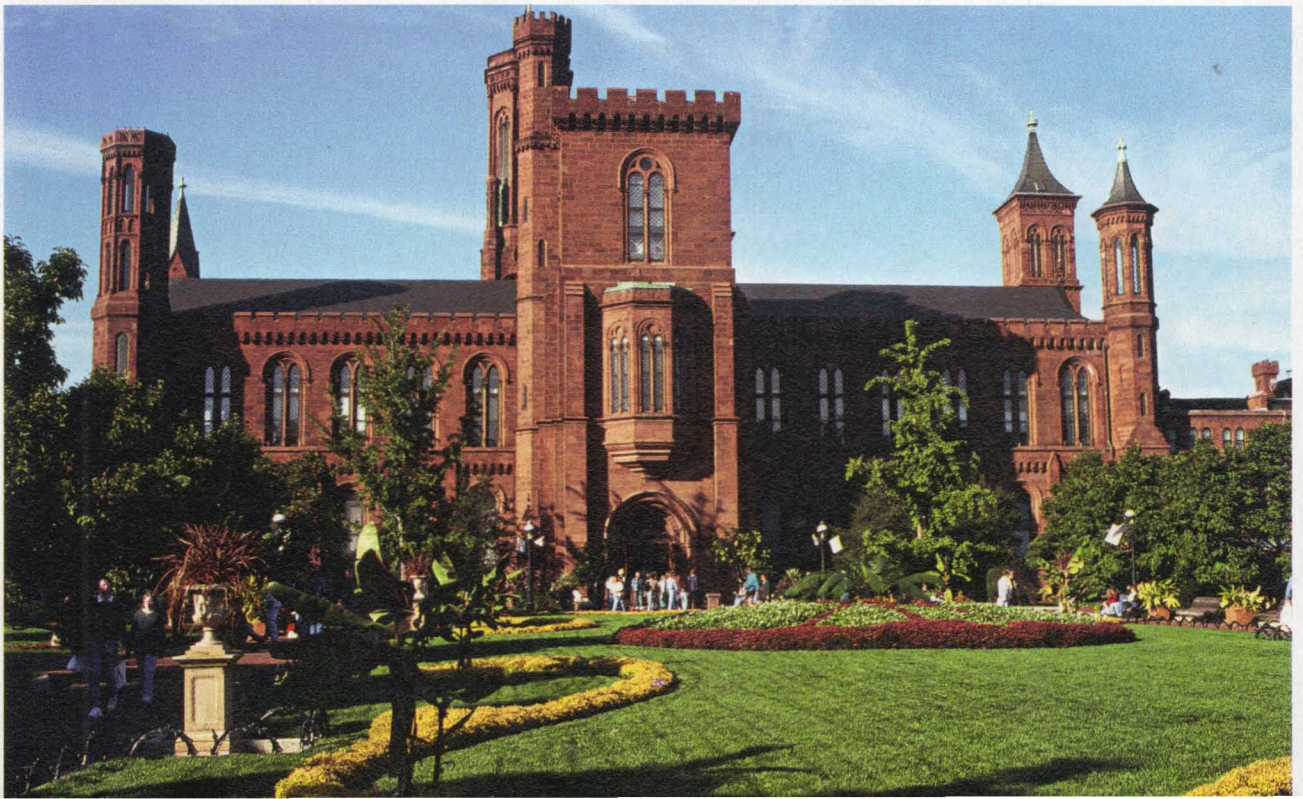
Smithson's nephew, like his uncle, was plagued with poor health and died in Pisa, Italy, in May 1835, leaving no heirs. The death of this obscure young man set in motion an extraordinary sequence of events. In London, a group of solicitors appeared on the doorstep of the American chargé d'affaires, bearing the startling news that an Englishman had left a "very considerable" estate to the United States of America.

For Adams, now serving in Congress after having been president, Smithson's bequest "signalized the spirit of the age," and he hoped that Congress might show its appreciation of Smithson's "comprehensive beneficence" by unanimously approving a bill to accept the bequest. More than a decade would pass, however, before the institution was founded in 1846.

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'THE CASTLE.'

The original building is now just a part of a much larger Smithsonian Institution.



ANCIENT



MYSTERIES



The search for the occult truths
that are buried in the teachings
of every religion

**MYSTIC
SHRINE.**
A Hellenistic
temple in
Segesta on the
island of Sicily



Robert Langdon, the tweedy hero of *The Lost Symbol*, comes to believe that the Ancient Mysteries, the collected wisdom of the ages, have been stowed in a secret place somewhere in Washington, D.C. Langdon is convinced that the clues he finds on the granite pyramid and the puzzles he solves will lead him to their discovery. In fact, there is no one collection. Only disparate fragments remain from the various strands of the Mysteries, from the teachings of pagan fertility and sun worship cults, all of which gradually disappeared after the advent of Christianity. Here, **Simon Cox** discusses the so-called mystery schools that date from Greek and Roman times and explains some of their beliefs and rituals.



Mithras, god of light

Some of the earliest mystery schools were in ancient Greece. Many of them were well known. However, the actual knowledge from within the schools was fiercely guarded, and initiates were expected to protect the secrets and rites of the fraternities with their lives. Just as in Freemasonry today, the initiates of the Ancient Mysteries schools took sacred oaths, and they vowed that death should seal their lips before they revealed any of the secret knowledge.

The mystery schools in ancient Greece were born from the disciplines of philosophy and mysticism. Sacred dramas connected with the Mysteries were performed there. The most prominent of these concerned Isis, the goddess whose cult began in ancient Egypt; Cybele, the great oracle of the ancient Asiatic world; and Demeter and Persephone, the Greek goddesses who gave birth to the Eleusinian Mysteries (box, Page 38).

This last was probably the most important of the mystery schools in ancient Greece, and it is thought to have begun in 1600 B.C. in what is modern-day Elefsina. It concerned itself with the recurring theme

of the immortality of the human soul, known as the psyche, whose true home is in the spirit world. For Eleusinians, birth in human form was death itself for the soul, and only through death could the soul finally be reborn.

Later, in Rome, there were mystery schools such as the cult of Mithras, which had imported much of the knowledge of the Persian Mithraic cult of the sun god. And so it was that the ancient knowledge was passed down through the generations.

The mystery schools of the Western world were finally forced underground between the fifth and sixth centuries when paganism was banned from the Roman Empire. It is said that the final decisive act in the destruction of the Ancient Mysteries was the closure of Plato's Academy in Athens in A.D. 529 by the Byzantine Emperor Justinian I.

However, the Ancient Mysteries did not die. They were kept safe and simply lay dormant, waiting to flourish again. Gnostics preserved many of the Mysteries that had become embedded within Christianity. In the Middle Ages, the Knights Templar kept them alive, as did the Hermeticists and the alchemists; and the founding of Rosicrucianism and other secret orders during the Renaissance led to a resurgence in the knowledge of the ancients.

The Lost Symbol tells us that Freemasonry kept safe a huge body of ancient knowledge and passes it down through the various degrees of the craft. Whether or not the secrets are understood in the modern era is open to debate, but there is no doubt that Freemasonry helps keep them alive.

Many of the world's religions could also be classified as guardians of the Ancient Mysteries. Christianity, Islam, Judaism, Zoroastrianism, Buddhism, and countless others all contain the germ of the Ancient Mysteries, passing down sacred and ancient traditions concern-

MYSTERY MAN.

Cornelius Agrippa and a table of letters from his *De Occulta Philosophia*

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ing the rebirth of the human soul.

In *The Lost Symbol*, the phrase “As above, so below” plays a pivotal role in Robert Langdon’s search for the location of the Ancient Mysteries; in fact, it is the lost key that unlocks all the other doors.

This principle also forms the basis of Hermeticism, a mystical philosophical tradition and teaching that developed in the cosmopolitan Egyptian city of Alexandria around the first century A.D. It renounced codified dogma, priestly authority, and the separation of God and man, and instead propounded a belief in inner enlightenment, declaring that everyone should aspire to a personal knowledge of the divine. Hermetic beliefs are to be found in the written works referred to collectively as *The Hermetica*.

The Hermetica covers topics such as philosophical discussions, mysticism, magic, astrology, alchemy, and medicine and was supposedly written by Hermes Trismegistus—a fusing of Thoth, the Egyptian god of learning, writing, and magic, with Hermes, the Greek god of communication, inventions, language, and travel. The two became combined in Ptolemaic Egypt to become Thoth-Hermes. This much-revered god was believed to know all the secrets of heaven and earth—secrets that might be revealed to the worthy through the power of magic and dreams.

By the time of the early Christian period, Hermes Trismegistus had evolved into an ancient sage, on a par with—but even older than—Moses, Pythagoras, and Zoroaster. It is uncertain why Thoth-Hermes was given the moniker “Tris Megistus,” or “Thrice Great.” Some Hermetic texts suggest that it was because of his three incarnations (the previous two being Enoch and Noah) or because he was the greatest philosopher, priest, and king. However, the *Emerald Tablet* of alchemy declares that the title paid tribute to his knowledge of the three wisdoms of the universe: alchemy, astrology, and theurgy (the practice of magical rituals).

The philosophical works and teachings that have survived indicate that the *Hermetica* once formed a substantial body of literature. The largest existing collection is known as the *Corpus Hermeticum*, consisting of 18

tracts originating from Alexandria and written in Greek, and is thought to date from the first three centuries A.D. Until the 17th century, it was credited to Hermes Trismegistus, but it was actually the work of a number of individuals.

Then, in 1945, papyrus texts were discovered in the Egyptian city of Nag Hammadi. The finds included Coptic Hermetic texts, some of which were already known as part of the *Corpus Hermeticum*, but also a previously unknown Hermetic text called *The Ogdoad and the Ennead*, or *The Eight out of the Nine*, which describes the eight stages of Hermetic initiation into gnosis (spiritual knowledge). Also included within the *Hermetica* is a text on astrology

THRICE GREAT.

Hermes Trismegistus, a fusing of the Greek and Egyptian gods Hermes and Thoth



and magic titled *Picatrix*, believed to have been composed in Harran, Turkey, during the eighth century A.D., as well as the *Liber Hermetis*, a 15th-century work on alchemy and astrological writings that declares Hermes Trismegistus to be its author.

However, in addition to the *Corpus*, numerous fragments, quotes, and references have come down to us through authors such as Iamblichus and Porphyry, and early Christian theologians including Clement of Alexandria (circa A.D. 150 to 212), whose writings indicate knowledge of Hermetic works. John of Stobi's *Anthologium*, from around A.D. 500, also contains some 40 passages and fragments of Hermetic thought.

Perhaps the most famous and concise work on

Hermetic philosophy is the *Emerald Tablet*. Alleged also to have been written by Hermes Trismegistus, the earliest surviving copy of this work appears in the *Book of Balmas the Wise on Causes*, discovered long ago in a cave in Tyana, Turkey.

The *Emerald Tablet* states, "That which is below corresponds to that which is above, and that which is above corresponds to that which is below, to accomplish the miracles of the One Thing." It also notes that the "structure of the microcosm is in accordance with the structure of the macrocosm"—indicating that the universe mirrors the earth and vice versa; the structure of the smallest atom contains within it the structure of the universe and vice versa; and the world of matter reflects the divine so that man mir-

ENCOUNTERING THE GODS IN ELEUSIS

The Eleusinian Mysteries, enacted in honor of Demeter, goddess of the earth and fertility, and her daughter, Persephone, were revealed to a wide variety of people in a series of rites. As **Giles Morgan** explains here, however, the penalty for initiates who revealed any of the inner secrets was death.

The Eleusinian Mysteries are among the earliest known of the Mystery Cults. They were based on the mythological story of Persephone and Demeter, and their important rituals of initiation were held in the Greek town of Eleusis, known today as Elefsina, not far from Athens. This ancient cult functioned as a secret society, revealing its ceremonies and beliefs only to the initiated.

It is thought that the Eleusinian Mysteries began around 1500 B.C. and the attendant ceremonies were performed every five years. This ancient Greek mystery cult also gained followers in Rome, and its rituals were re-enacted over a period of around 2,000 years. They were open to a wide variety of people, including slaves, although anyone guilty of murder or "barbarians" and those who could not speak Greek were excluded. Women could participate equally with men.

The central myth around which the mystery cult was based was that of the goddess of fertility and agriculture, Demeter, and her daughter,



Women danced in honor of Demeter around the sacred well, Kalichoron.

Persephone. Demeter is one of the oldest of the Greek deities and was the daughter of Cronus and Rhea. She is particularly associated with crops such as wheat, which, it was believed, she nurtured and protected.

During the Eleusinian Mysteries, the return of Persephone, symbolizing the return of spring and new life, would be

celebrated, although the details of the rituals were kept secret. However, it is known that in September, six months before the main ceremonies known as the Great Mysteries were conducted, rituals called the Lesser Mysteries took place. They were held beside the River Ilissus that runs through Athens. The Greater Mysteries were staged at the sanctuary of Demeter below the Acropolis in Athens. Following the announcement that they were underway, the next four days were devoted to offering sacrifices and rituals of purification beside the sea. Once these rituals were completed, a great procession of people assembled and set out from Athens, following a route known as the Sacred Way to Eleusis.

The procession would halt at certain points, often shrines, where further rituals took place. The procession was led by two key figures, the hierophant and the daduch. The hierophant was said to reveal "sacred things" to the initiates of the cult, who were known as the *mystes*, while the daduch was known as the torchbearer. Apparently, when crossing the River Cephissus, the *mystes* shared jokes with one another, and this part of the procession focused on laughter and jubilant behavior. The congregation reached Eleusis in late evening, and the main ceremony of the Mysteries took place the day after.

It is said that the worshippers offered sacrifices to Demeter and

rors God and God “creates man in his own image.” What happens in one realm affects another, be it in the material world or the spiritual world. Hermetic thinking states, “Know ye not that ye are gods?”

At one point in *The Lost Symbol*, Peter Solomon recites the ancient saying to Robert Langdon, who has been reminded of it twice already that night. It has a tangible depiction in the painting on the ceiling of the Capitol building Rotunda, *The Apotheosis of Washington*, which portrays America’s first president becoming a god. Hermetic thought, as highlighted in the macrocosm-microcosm concept, also believed that everything was one. Authors Michael Baigent and Richard Leigh, in their book *The Elixir and the Stone*, describe this as “a single

all-persuasive, all-encompassing totality, a single whole in which all dichotomies, all distinctions between body and soul, spirit and matter, were accommodated and harmoniously integrated in the comprehensive design. ... For the hermeticist, gnosis entailed direct apprehension of, and integration with, the all-inclusive harmony.”

This harmony brought with it the interconnection of everything, so that man could now play an active role and effectively change his lot in life. No longer would he be the helpless pawn dependent upon the whims of the gods and fate; he could now be an active participant, manipulating the world around him to his own will in order to bring about significant change. Baigent and Leigh explain that according to

Persephone but that they went without eating in imitation of Demeter when she was searching for her daughter, who was taken against her will to the underworld by Hades. Like the goddess, they would drink only barley water. Some historians have argued that the barley water, known as *kykeon*, was mixed with pennyroyal and had a hallucinogenic effect. It has been hypothesized that it may have been created by the presence of a fungus called ergot that is capable of producing a similar effect in people to that of LSD or “magic mushrooms.”

The main rituals—about which very little is known—would have taken place within the temple devoted to Demeter and Persephone. The *mystes* would have entered a great hall within the temple called the Telesterium, or “hall of rituals.” The rituals, it is believed, were held at night and illuminated by torches. They were divided into three main sections: first, the *legomena*, or “that which was said,” perhaps involving a retelling of the Persephone myth; second, the *dromena*, “that which was done,” which may have involved some form of ritual drama; and finally the *deiknyomena*, “that which was shown.” In the final part of the ceremony, the *deiknyomena*, the hierophant would enter the most sacred part

of the temple, the *anactorum*, or “the palace,” where he would show the initiates relics sacred to the goddess Demeter. Initiates swore never to reveal what they had seen, under penalty of death. Through the course of the ceremony, the initiates attained a state known as *epopteia*, a state of purity, and also, perhaps, a belief in the potential for rebirth.

Although the Eleusinian Mysteries gained great popularity in Greece and in the Roman world, they declined in importance with the ascension of Christianity. The sanctuaries sacred to the Hellenistic gods were banned from performing their rituals under the Roman Emperor Theodosius I in A.D. 392.

It has been observed that there are similarities between the Eleusinian Mysteries and Freemasonry. There are parallels to be found in the insistence on secrecy and in a hierarchical system of initiates who are threatened with death for revealing the inner mysteries of their order. They also both have as their aim the development and growth of the individual through a series of revelatory rituals in which the candidate achieves a higher state of self-knowledge.

Demeter and Persephone

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the “As above, so below”/macrocosm-and-microcosm principle, “if everything were indeed interconnected, man himself ... could make things happen to other spheres. If one pulled a particular string or thread in the tapestry of reality, something else, in some other quarter of the tapestry, would ensue.”

The Hermetic idea of the macrocosm and microcosm thus became a powerful analogy, seen in alchemy as the transmutation of base metals into gold, which likewise created a parallel transformation of the alchemist’s soul.

Hermeticism played a large role in influencing Islamic science and mathematics, eliciting many Arab translations of old Hermetic texts. Indeed, one Arab writer notes that 22 Hermetic works

were available, with 13 on alchemy alone.

The later Crusades to the Holy Land brought Europeans into contact with these ideas for the first time. By the mid-13th century, the Holy Roman Emperor Friedrich III of Germany added his seal of approval to the study and promulgation of Hermetic thought. One of the most famous 13th-century alchemists and Hermetic philosophers was the German philosopher and theologian Albertus Magnus, while in the 14th century, France’s Nicholas Flamel was a famous proponent of alchemy and magic.

It was the Italian ruler and humanist Cosimo de’ Medici, however, who had the most crucial role in collecting and promoting the *Hermetica*, and hence had a direct effect on the enlightenment of Renais-

HOW THE OCCULT SHAPED AMERICA

The occult plays a starring role in *The Lost Symbol*, beginning with Robert Langdon’s early discussion about the Hand of the Mysteries and culminating in Mal’akh’s ritual magic and incantations near the novel’s end. Here **Mitch Horowitz**, author of *Occult America: The Secret History of How Mysticism Shaped Our Nation*, provides some background on Brown’s references.

Dan Brown introduces his novel with a quote from *The Secret Teachings of All Ages* by Manly P. Hall and refers to him again later in the book. Why does Hall loom so large in this book and in the history of the occult and of Freemasonry?

Manly P. Hall was the dean of American occultism in the last century. His book *The Secret Teachings of All Ages*—which he privately published in 1928, when he was 27 years old—is considered the indispensable guide to occult symbolism and esoteric philosophy. Brown has called him a major influence. Hall was also a prominent Freemason, and he was very interested in the hidden aspects of American history. In another of his books, *The Secret Destiny of America*, Hall developed the theory that the nation’s founding was part of a utopian scheme launched by ancient philosophers and secret societies who were interested in religious liberty and self-governance. It’s a fanciful notion, but it rightly recognizes that occult in-



Mystics Helena Blavatsky and Henry Olcott

fluences from Europe—such as the religious liberalism of Freemasonry and visions of an enlightened society found in the so-called Rosicrucian manuscripts—left an impression on some of America’s founders.

Aleister Crowley, a member of the Hermetic Order of the Golden Dawn, is invoked as an inspiration for Mal’akh in *The Lost Symbol*. Why would he be a role model?

Crowley was a British occultist of the late 19th and early 20th centuries who was often mislabeled as a Sa-

tanist. In fact, he was a brilliant, though erratic, intellect who believed that men and women needed to reclaim their birthright to inner power, or “True Will.” His most famous maxim was: “Do What Thou Wilt Shall Be the Whole of the Law.” You’ll find it today on clothing designed by Jay-Z. Crowley’s experiments with ritual magic and his desire for power are what made him a model for Mal’akh.

Who are Madame Blavatsky and Henry Olcott—whose movement of Theosophy is mentioned in *The Lost Symbol*—and why are they so important in the history of the occult in America?

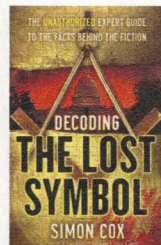
Blavatsky, a Russian noblewoman, and Olcott, an American Civil War colonel, formed an unlikely alliance in New York City in 1875 when they cofounded the occult movement called Theosophy. They believed that all the world’s religions grew from a primeval philosophy that had been lost to modern life, and they wanted to recover it. Their influence was remarkable: They not only inspired the revolutions in alternative spirituality experienced in the 20th and 21st centuries, but Mohandas Gandhi credited Theosophy with moving him toward his philosophy of universal brotherhood. Blavatsky and Olcott’s legacy has never been fully appreciated.

sance Europe. In the 1450s, he sent Fra Leonardo del Pistoja to Macedonia to find philosophical works. Pistoja brought back the *Corpus Hermeticum*, which caused Cosimo such excitement that he immediately ordered the humanist Marsilio Ficino to translate it into Latin. The newly translated *Corpus* ignited interest in Hermeticism and alchemy, which spread to the rest of Europe.

Around this time, some Hermetic occult orders were founded, notably the Rosicrucians, whose emblem was the rose (symbolizing the soul) and the cross (symbolizing the material world). Speculative Freemasonry, which began in the 17th century, also held Hermetic beliefs in high regard. As Freemason Albert Pike would later note in his 1871 *Morals and*

Dogma of the Ancient and Accepted Scottish Rite of Freemasonry: “He who desires to attain the understanding of the Grand Word and the possession of the Great Secret, ought carefully to read the Hermetic philosophers, and will undoubtedly attain initiation, as others have done; but he must take, for the key of their allegories, the single dogma of Hermes, contained in his *Table of Emerald*.”

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You quote religious scholar Alvin Boyd Kuhn as saying, “Without Ralph Waldo Emerson” (who was among the first serious writers to carefully consider topics such as the Persian prophet Zoroaster, Hindu mythology, the Greek mage Pythagoras, Confucius, Buddha, the Vedas, Hermes, and reincarnation), “Blavatsky could hardly have launched her gospel when she did with equal hope of success.” Why was that so?



Crowley

The Transcendentalists, and Emerson in particular, were among the earliest American figures to explore esoteric and Eastern philosophies. These things were out of reach for most Americans. Even the great religious book of ancient China, the Tao Te Ching, was not available in English until 1838. By the mid-19th century, probably no more than four or five copies of Hinduism’s sacred text, the Bhagavad Gita, could be found in America. Emerson, who was sometimes called the “Yankee mystic,” gave Americans their first exposure to Eastern ideas. A generation later, this helped the reading public make sense of Blavatsky when she spoke of pre-Christian philosophies and the teachings of Hinduism and Buddhism. Is there a reason why the golden age of Freemasonry preceded the vogue for Spiritualism and the occult in America? In what way are these various philoso-

phies and religions mirrored in the utopian vision of America’s Founding Fathers?

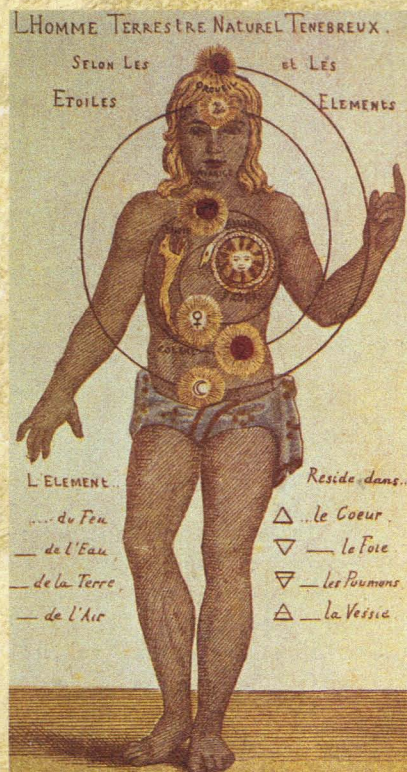
In a sense, Freemasonry was a clearinghouse for a wide range of religiously liberal and esoteric ideas. In the 17th and 18th centuries, Masonry saw itself as a link in a universal search for truth

that extended back to the ancient civilizations. The fraternity embraced esoteric symbols, such as pyramids, pentagrams, obelisks, and all-seeing eyes—which it wove into American life. We can see its influence, for example, in the eye-and-pyramid on the back of the dollar bill. Masonry’s impact on early American life helped encourage experimental religious movements, like Spiritualism, which engaged in séances and spirit trances, and “mental healing,” which morphed into what we today call the power of positive thinking.

Dan Brown credits the Zohar, a collection of ancient texts that are central to Jewish mystical thought, as having advanced theories of the universe quite similar to what is now being formulated in mainstream physics. How did the Zohar figure into occult thought?

During the Renaissance, several Christian scholars embraced Jewish mysticism, or kabbalah, which they considered a source of universal truth in harmony with both Christianity and science. The central belief among

Renaissance occultists, which re-emerged in Theosophy, was that a hidden philosophy undergirded all the world’s belief systems. The Zohar and other works of Jewish mysticism are, of course, filled with metaphor and symbolism, and it is difficult to say that they are in harmony with modern science. But that was the occult ideal.—Amy D. Bernstein

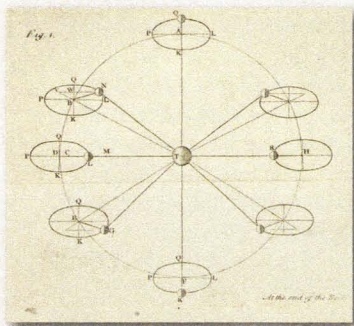


The seven Chakras, 19th century



Eminences Grises

THE ENLIGHTENMENT
EGGHEADS WHO PROVIDE THE
CLUES IN DAN BROWN'S NOVEL



As in every Dan Brown novel, *The Lost Symbol* is crammed full of historical clues—and this time they involve the history of Freemasonry and its links to Enlightenment figures. Readers of *The Da Vinci Code* will already be well acquainted with Isaac Newton, a mathematician, physicist, astronomer, and theologian whose tomb in Westminster Abbey provided a lead in the quest for the Holy Grail. Now, there are again several references to Newton, this time about his scale of temperature measurement and his studies as an alchemist.

Another historical figure, Francis Bacon, the author of the utopian treatise *New Atlantis* and a translator of the King James Bible, is also brought into *The Lost Symbol*. Here, bestselling author **Simon Cox** explains why these two Enlightenment luminaries and founders of modern science were important in the history of Western esoteric thought and why Brown gives them so much exposure in his new book.

ISAAC NEWTON

Newton was an astounding example of a polymath: a man possessing deep understanding and skill across many fields of learning, any one of which would have been sufficient to satisfy an ordinary person. He studied physics, mathematics, astronomy, theology, philosophy, and the arcane subject of alchemy.

Near the end of the 17th century, Newton turned his thoughts toward measuring temperature and devised a thermometer using the Newton scale, which had 33 degrees as its boiling point. The Swedish scientist Anders Celsius had probably heard about Newton's invention, and he produced his own temperature scale, almost exactly three times larger. Both have 0 degrees for freezing, and Newton's 33-degree boiling point corresponds to 100 degrees Celsius. Celsius's scale is still used today, since it is more practical, while Newton's scale will be unfamiliar to most. In *The Lost Symbol*, The immersion of a pyramid into boiling water to reveal a luminescent message moves the plot

along and provides another link with the symbolism associated with the number 33.

Newton had a great interest in religion but was an unorthodox Christian. His biological father died before he was born, and his mother subsequently married a clergyman with whom he clashed. He admitted to threatening to burn their house down at some time during his youth, and it is possible that his Christian faith was colored by his attitude toward his stepfather. It is said that Newton accepted the Arian heresy, which included a belief that Jesus was not of the same substance as God the Father and that there had been a time when Jesus did not exist. He studied closely the texts in the Bible—scouring them for scientific information—and wrote religious tracts, believing that he'd been chosen by God to shine light on the meaning of the Scriptures. Some of Newton's unpublished documents prophesy that the end of the world will come in 2060, while others predict the creation of a new world that will be blessed with divine

MYSTICAL SCIENCE. A mathematical illustration from a text by Newton (above); a Rosicrucian view of the Invisible College (opposite)

peace. Six years after Newton's death, his *Observations upon the Prophecies of Daniel and the Apocalypse of St. John*, an important work on the Bible, was published.

In *The Lost Symbol*, the motto *Jeova Sanctus Unus* ("One True God") is revealed, and Robert Langdon explains that this provided a pseudonym for Newton. In Latin, which has no letter *i*, so a *j* is substituted, *Jeova Sanctus Unus* can be anagrammed "Isaacus Newtonuus." Newton used this when writing to friends about alchemical topics and exchanging documents, so that he did not risk his identity being known.

MAGICIAN.

Isaac Newton tried to find the elixir of life and the philosopher's stone.

Dan Brown also alludes to a legend regarding Isaac Newton's dog, Diamond, who reputedly tipped over a candle and started a fire that destroyed important documents. In the novel, Peter Solomon's 150-pound mastiff, Hercules, has eaten

Langdon's precious 17th-century illuminated-vellum copy of the Bible.

While no direct evidence exists that Isaac Newton was a Freemason, there are suggestions that he may have been a member of the craft. According to some researchers, he was master of the mysterious Priory of Sion between 1691 and 1727. He was also a member of a learned society called the Gentleman's Society of Spalding, which over the centuries counted among its members the poet Alfred, Lord Tennyson, the poet and literary scholar Alexander Pope, the physician-scientist Hans Sloane, and the naturalist Joseph Banks.

It is known that Newton was interested in alchemy. His papers suggest that he might have sought two holy grails: the philosopher's stone (a necessary tool) and the elixir of life (a supposed universal solvent).

As warden and master of the Royal Mint from 1696 until the end of his life, he embarked upon a campaign against forgery, which was rife at the time. He belonged to the Royal Society and served as its president from 1703 until his death, and he was a member of the British Parliament from 1689 to 1690, and again in 1701. On March 20, 1727, Newton died. He was buried in Westminster Abbey, the first scientist to achieve that honor.

Newton had a great interest in the ancient Egyptians and wrote about their astronomy and system of measurement in the *Chronology of Ancient Kingdoms, Amended*. The economist John Maynard Keynes, who purchased a large part of Newton's manuscript collection, said in a speech to the Royal Society in 1942, "Newton was not the first of the Age of Reason. He was the last of the magicians."

FRANCIS BACON

Francis Bacon was a man who cast a long shadow over the philosophical thinking of the Western world. He is one of Dan Brown's "brain trust of the world's most enlightened minds," along with Isaac Newton, Robert Boyle, and Benjamin Franklin. He appears again as the author of *New Atlantis*, the book describing a utopian vision of a society said to have influenced the Founding Fathers in establishing the United States of America.

Bacon wrote *The Wisdom of the Ancients*, in which he explained the hidden meaning of ancient myths, and may have had some hand in editing the King James Bible. In *Sir Francis Bacon: Poet, Philosopher, Statesman, Lawyer, Wit*, author Parker Woodward writes, "It has been suggested that the Authorized Version of the Bible printed in 1610/11 was submitted for final editing to Francis, but that could only have been for rounding off its English, the translation having been made by a special commission of scholarly clergymen."

American occultist and philosopher Manly P. Hall was more convinced of Bacon's role in producing the



THE INVISIBLE COLLEGE

A secret think tank for science and esoteric knowledge

In *The Lost Symbol*, Robert Langdon claims that an “Invisible College” helped preserve the secrets of the Ancient Mysteries threatened by the intolerant attitudes of the 17th century.

Despite what people might think, an invisible college really did exist. This society of distinguished scientists and philosophers, including Robert Boyle, Elias Ashmole, Christopher Wren, Francis Bacon, and Isaac Newton—many of whom were active Freemasons—was founded in the mid-1640s as a secret forum for discussion on science, alchemy, and esoteric ideas.

The religious and political climate of that time meant that the discussion of some of these issues was potentially a dangerous undertaking. Scientists such as Galileo had provoked the ire of the Roman Catholic Church by suggesting that the Earth moved around the sun, and those found guilty of heresy could be burned at the stake. In England, the turmoil of the Civil War and the paranoia of Puritanism led to appalling witch hunts.

It was vital, therefore, that the exchange of such information be concealed. It has been suggested, too, that the move from operative to

speculative Freemasonry may have taken place during this period because the secrecy of the operative stonemasons’ guilds provided secure meeting places for freethinkers and philosophers. By veiling their intellectual pursuits in allegory, it was possible to avoid the suspicion of the state and the church. The Invisible College emerged into the open when, in 1662, Charles II granted it the privilege of a royal charter. Soon after, it was renamed the Royal Society of London for Improving Natural Knowledge.

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King James Bible. In a lecture called “Rosicrucian and Masonic Origins,” he contended, “The first edition of the King James Bible, which was edited by Francis Bacon and prepared under Masonic supervision, bears more Mason’s marks than the Cathedral of Strasbourg.” Robert Langdon knows him to have been a Rosicrucian. Dean Galloway suggests that Bacon may have even been the legendary Christian Rosenkreuz, founder of the Rosicrucian movement.

Bacon studied at Trinity College, Cambridge, then spent three years in France in the service of the English ambassador. He worked as a barrister, eventually becoming solicitor general and attorney general. His interests lay in gaining knowledge of everything, and his written work displays a wonderful command of the English language.

Bacon was well aware that merely to conduct and observe scientific experiments was not enough. To be worthwhile, these observations require careful analysis. In *New Atlantis*, he tells the story that enhanced his reputation among the men who went on to form the Royal Society. They took inspiration from Bacon’s vision of “Solomon’s House” on his “Island of Bensalem.” This was a kind of research college (its name derived from the biblical King Solomon) where scientific inquiries into the creations of God were pursued.

Bacon’s *New Atlantis* is set on a utopian island, Bensalem, in the South Pacific. It is in sharp contrast with the Europe of the time, when various forms of Protestantism and Roman Catholicism were in sometimes deadly conflict. The name “At-

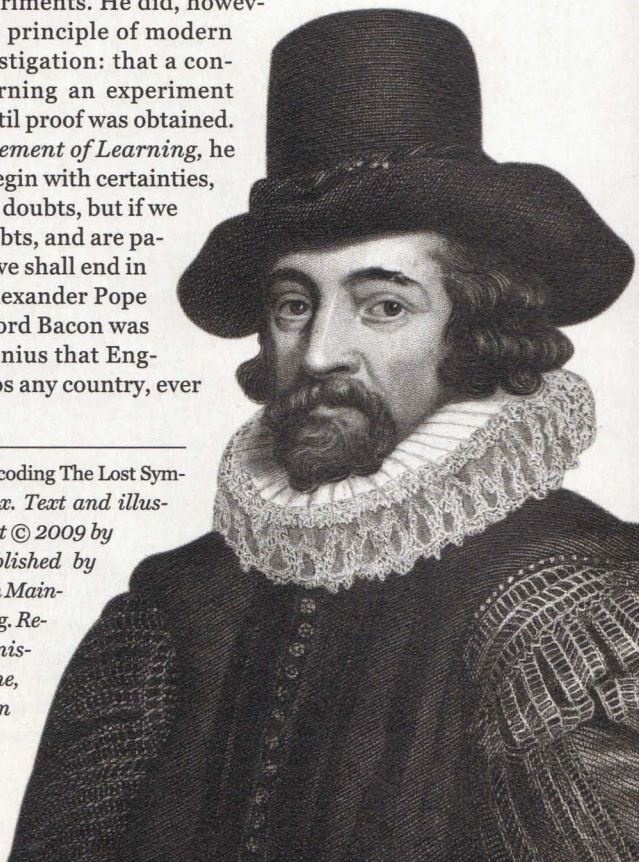
lantis” is taken from the mysterious civilization, which, according to legend, was inhabited in very ancient times. Its disappearance and its original whereabouts have been disputed for millenniums.

Bacon’s influence on the development of science was not that he made great discoveries or set up elaborate experiments. He did, however, outline the principle of modern scientific investigation: that a conclusion concerning an experiment should wait until proof was obtained. In *The Advancement of Learning*, he states, “If we begin with certainties, we shall end in doubts, but if we begin with doubts, and are patient in them, we shall end in certainties.” Alexander Pope said of him, “Lord Bacon was the greatest genius that England, or perhaps any country, ever produced.”

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POLYMATH.

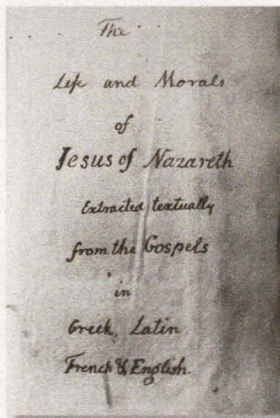
Francis Bacon was a gifted scientist and lawyer, and a superb writer.





Jefferson and His Good Book

DEISM, THE 'NATURAL' RELIGION OF THE ENLIGHTENMENT, WAS THE INSPIRATION FOR ONE OF AMERICA'S MOST INFLUENTIAL THINKERS



The Jeffersonian Bible—a revised version of the Gospels from which Thomas Jefferson purged all the miracles, the Virgin Birth, and the story of Christ’s Resurrection—is singled out for praise at the end of *The Lost Symbol* for restoring the Bible’s “genuine doctrines.” Jefferson’s rather unorthodox decision to refashion the Bible shows how deeply he was influenced by deism. This rational system of thought accepts that there is a God but denies divine revelation and espouses a belief in the innate goodness of mankind. Here, **E.M. Halliday**, a former senior editor at *American Heritage* magazine, describes how Jefferson’s political views reflected the deists’ optimism concerning human nature. If Americans used the Bible as a moral compass, Jefferson believed, the country’s fledgling democratic experiment ultimately would prove to be a success.

TIDYING UP THE BIBLE.

The title page of Jefferson’s Bible, believed to be in his hand and preserved in the Smithsonian Institution’s collections at the National Museum of American History

The philosophical essays of the late Henry St. John Bolingbroke, the remarkable British politician and intellectual, were first published in 1754 and were being widely read and commented on by the time Thomas Jefferson got to William and Mary College in 1760. Jefferson found them fascinating, and copied into his commonplace book extracts amounting to over 10,000 words—much more than from any other author. It was Bolingbroke who gave him the essentials of deism, the “natural” religion that asserted the existence of a Creator as a rational deduction based on observation of the laws of physics and astronomy—a God who, having designed the universe, stepped back and let his creation run by itself, without further divine intervention and without access to knowledge of his will except through close study of natural phenomena, including human nature.

One problem for deism, however, since it denied the authority of such “revealed” rules of behavior as the Ten Commandments, was to discover some natural human attribute that would serve as a guide to morality. The moral philosophers of England and

Scotland in the 17th and 18th centuries, from John Locke (1632–1704) through Francis Hutcheson (1694–1746) and David Hume (1711–1776), agreed that the biblical doctrine of original sin was a slander on human nature and that mankind was naturally good. They also agreed that human goodness was controlled by an inborn faculty they usually call “the moral sense,” though they differed somewhat in their particular definitions of it and how it operated.

Jefferson, no doubt with William and Mary’s William Small as his mentor, owned and studied the works of these philosophers, and it is possible to trace his beliefs about the moral sense back to them fairly specifically. For an understanding of his mind and character, however, the important thing is to look at his own formulation of the theory; and luckily he summed it up more than once in personal letters. To his nephew Peter Carr he wrote from Paris in 1787:

Man was destined for society. His morality, therefore, was to be formed to this object. He was endowed with a sense of right



PEN IN HAND.
An engraving
of the author
from a
19th-century
painting

Th Jefferson

**DEIST.**

Bolingbroke's essays deeply influenced Jefferson's view of religion.

and wrong, merely relative to this. This sense is as much a part of his nature, as the sense of hearing, seeing, feeling, touch; it is the true foundation of morality ... The moral sense, or conscience, is as much a part of man as his leg or arm. It is given to all human beings in a stronger or weaker degree ... It may be strengthened by exercise, as may any particular limb of the body. This sense is submitted, indeed, in some degree, to the guidance of reason; but it is a small stock which is required for this ... State a moral case to a ploughman and a professor. The former will decide it as well and often better than the latter because he had not been led astray by artificial rules.

The example of the perspicacious plowman immediately explains part of the appeal of the moral-sense theory to Thomas Jefferson: its usefulness as a basis for the validation of democracy. It promised that a ma-

jority of people, well informed and given the opportunity to make a choice on any significant question, would make the right one just by following the moral impulse with which they are naturally endowed. For Jefferson, morality is socially oriented, in any event; it is not selfish but basically altruistic: "These good acts give us pleasure, but how happens it that they give us pleasure? Because nature hath implanted in our breasts a love of others, a sense of duty to them, a moral instinct, in short, which prompts us irresistibly to feel and to succor their distresses."

The conviction that the moral sense was essentially altruistic to some extent accounts for Jefferson's rather surprising decision, during his first term as president, 1801 to 1805, to draw up what he called a "syllabus" of the merit of the doctrines of Jesus compared with those of ancient philosophers such as the Epicureans and the Stoics, as well as those of the Jews, all of which he now found to put insufficient emphasis on unselfish behavior. He also believed that the teaching of Jesus had been "mutilated" and "misstated" by the writers of the Gospels and followers like St. Paul but that when cleared of their "corruptions" they would be "a system of morals ... the most perfect and sublime that has ever been taught by man."

It was a decidedly Jeffersonian abridgment: He had eliminated a large percentage of the very things that were most indispensable, from the point of view of a conventional Christian of any denomination whatever. Gone was any statement or implication that Jesus was divine or a Messiah to whom God's will had been specially revealed; gone was any indication that belief in these things would bring salvation; gone was any reference to the Holy Ghost or the Trinity; gone was the story of Christ's Resurrection and Ascension to heaven. Gone, in short, was a great deal of what is usually found in a formal definition of "Christian," and Jesus had turned out to be, of all things, what today would be called a secular humanist—one, indeed, of great wisdom, sensitivity, and eloquence, but on the whole a man with a close intellectual resemblance to Thomas Jefferson.

Although not much resulted immediately from this remarkable contribution to Bible study, and Jefferson quietly filed it away, he did not forget about it. At 76 and retired at Monticello, he had time on his

hands; and shortly thereafter, he began to construct a much more elaborate version of an expurgated Gospel that he called "The Life and Morals of Jesus of Nazareth." It must have required many painstaking sessions in his study with scissors and paste, for it consisted of carefully chosen clippings from four New Testaments, one in Greek, one in Latin, one in French, and one the King James version in English. It is interesting that in adopting "the morals of Jesus" as superior to those of the classical philosophers of Greece and Rome, he contradicted his early mentor Bolingbroke, who had explicitly argued that a system of ethics derived from the New Testament would be less "entire" and "coherent" than one derived from such "ancient heathen moralists" as Seneca and Epictetus. Jefferson probably accepted this view as a young man, but now he found that these writers were "short and defective" in "developing our duties to others." Jesus, he said, surpassed them, "inculcating universal philanthropy, not only to kindred and friends, to neighbors and countrymen, but to all mankind, gathering all into one family, under the bonds of love, charity, peace, common wants and common aids."

This heavy emphasis on inclusive altruism, empa-

thy, and benevolence became a cardinal point in Jefferson's philosophy later in his life. But it certainly conditioned his vision of an ideal democratic republic: The moral doctrines of Jesus, he believed, if generally put into practice, would go far to ensure the social harmony requisite for a successful, self-governing nation. It seems likely that it must also have affected his feelings about slavery and his own guilt-ridden involvement in that "abomination," for (as his relationship with Sally Hemings could hardly have failed to remind him daily) there was no way that "the whole family of mankind" could exclude one whole race of humanity.

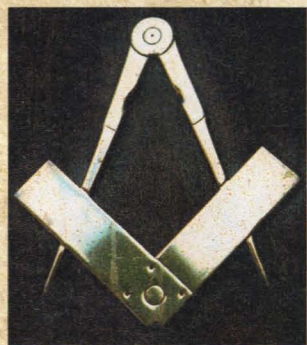
One of the most curious aspects of Jefferson's laborious project of editing the Gospels is that he kept the whole thing a close secret. He did have the extracts bound by a professional, but there is no evidence that anyone else saw the second version of his Gospel before his death six years later, shortly after which his daughter Patsy (Martha) found the surprising volume among his papers.

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CUT AND PASTE.

Jefferson's copy of "The Life and Morals of Jesus of Nazareth," where he added and excised sections of text. From the collections of the National Museum of American History





A WORLD OF SYMBOLS

From the occult
to the everyday, these universally
familiar images may yet unveil
key spiritual truths

Dan Brown's novels are always full of symbols and codes and messages hidden in works of art—and this current bestseller is no exception. From iconic images of Freemasonry, Rosicrucianism, and alchemy, including those in one of Albrecht Dürer's masterpieces, to a number of hard and not-so-hard codes and ciphers, here's a look at some of the author's many visual references—and an explanation of their meaning.

MASONIC REMINDERS OF THE INTERIOR LIFE

The symbols in this 19th-century Freemasons' rug at right can be found in all lodges: a Masonic temple; two pillars, Boaz and Jachin, that once stood on the western side of Solomon's Temple; a checkerboard floor, a reminder of the Knights Templar coat of arms and of the diversity of God's creation; the tools of a master stonemason (a trowel and hammer, a pair of compasses, and a T square), which show how a Freemason works to transform himself from a "rough" to a "smooth stone"; and the sun, moon, and stars, elements of the cosmos and obedient to God, who is represented by the letter "G," surrounded by fire. The curling rope, a "chain of union," frames the cosmos and unites all the elements within it, just as it decorates the walls of the Masonic temple, encircling and protecting those who perform rituals. The cardinal points north, south, and west stand for the mystical qualities darkness, beauty, and strength.

Stairs denote a Mason's ascent to higher knowledge.





THE HAND OF THE MYSTERIES

The Hand of the Mysteries is an allegory that uses the imagery of alchemy to describe the soul's search for divine truth. According to the mystic and philosopher Manly P. Hall in *The Secret Teachings of All Ages*, "The fish is mercury and the flame-bounded sea in which it swims is sulfur, while each of the fingers bears the emblem of a Divine Agent through the combined operations of which the great work is accomplished. The key represents the Mysteries themselves. The lantern is human knowledge. The sun, which may be termed the 'light of the world,' represents the luminescence of all creation. The star is the Universal Light which reveals cosmic and celestial verities. The Crown is Absolute Light—unknown and unrevealed—whose power shines through all the lesser lights."



THE CIRCUMPUNCT

Its name is derived from the Latin *circum*, "surrounding," and *punct*, or "point." Alchemists used the circumpunct as a symbol for gold. In two of the world's oldest civilizations, China and Egypt, the point within a circle represented the sun. To Taoists, it represented the divine creative spark.

THE PYRAMID AND ITS ALL-SEEING EYE

On the dollar bill, in a design modeled on that of the Great Seal of the United States, the all-seeing eye, a symbol for divine providence, floats above an unfinished pyramid, which represents enlightenment. The eye blesses the work of the young nation. At the bottom, a Latin message reads, "A new order for the ages," the utopian dream of the early founders.



THE DOUBLE-HEADED EAGLE AND THE NUMBER 33

A double-headed eagle, the "eagle of Lagash" (named after an ancient artifact unearthed in the Sumerian city of Lagash), represents the idea of transformation, both in alchemy and in spiritual life. When paired with the mystical number "33" (the Bible lists 33 miracles performed by Jesus Christ, and Jesus was crucified at age 33), it is the emblem for a 33rd-degree Mason in Scottish rite Freemasonry.





GOD THE ARCHITECT

Freemasonry requires belief in a higher power, a great Deity who is seen as the master architect and master Mason. Certain Rosicrucian groups also use the title to denote their Supreme Being. In Hermeticism, God is an internal ideal, radically different from the Christian realization: Human beings make their own reality and create God within themselves. This description of God is the closest to the Masonic ideal.



SOLOMON'S SEAL AND A SNAKE DEVOURING ITS TAIL

The emblem from a book by Eliphas Levi, titled *Transcendental Magic* (left), contains the core message of occult doctrine. In it, two figures, Macroprosopus and Microprosopus, form the shape of a hexagram, or six-pointed star, which is also known as Solomon's Seal, a kabbalistic and mystical symbol representing the integral unity of God and man and of matter and spirit. The words "as above, so below" and "as below, so above" are from an influential Hermetic text, the *Emerald Tablet*, implying that the universe mirrors the earth and vice versa. The ouroboros, a serpent devouring its own tail, is an archetypal symbol of the natural cycle: life from death, creation from destruction.



THE ROSE AND THE CROSS

The symbols of Rosecrucianism, the rose and cross have ancient origins. The cross is thought to have been used in Egyptian and other early sun worship rituals. The rose, a Masonic symbol of rebirth, is also found in the art of ancient Egypt and China. Together, they appear as part of the rose croix degree, the 18th in Freemasonry's Scottish rite.

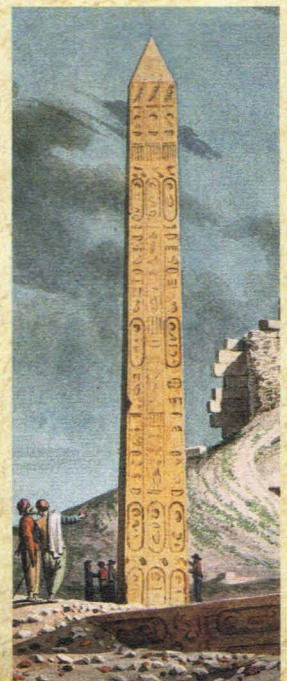


19TH-CENTURY MASON'S APRON

When he joins the lodge, each Freemason receives a white lambskin apron, to symbolize innocence. As the candidate moves through the degrees of Freemasonry, he wears aprons with different symbols and colors to signify degrees and responsibilities. Many of these aprons were painted, as is this one from 1817 that is signed by Boston artist Nathan Negus.

THE OBELISK

An architectural feature of Pharaonic Egypt, the obelisk was a symbolic representation of a ray of the sun God Ra and was often erected in pairs at the entrances to temples. These tapering columns were topped by a pyramidion, which was sometimes plated in gold, brass, or silver to reflect the rays of the sun. During the Roman imperium, many Egyptian obelisks were transported to Rome, where they gradually became associated with the idea of imperial grandeur and immortality, and, later, began to be used as commemorative monuments.



DECODING THE LOST SYMBOL

How good are the codes in *The Lost Symbol*, and are they convincing to the experts? Here, journalist **Stephen Pincock**, author of *Codebreaker: The History of Codes and Ciphers*, gives his expert opinion.

MEDIEVAL CIPHER. This Theban script and key were attributed to Honorius and preserved by Heinrich Cornelius Agrippa.



Are Dan Brown's codes difficult or easy? Are they accurate?

The ciphers that Brown uses in *The Lost Symbol* are very simple, understandably. I imagine it would have been fairly easy for him to write ciphers that nobody would have a chance of breaking without a great deal of effort, but that would be no fun for the reader and would have slowed Langdon down a lot! As it is, at least some of the readers have got half a chance, and it is feasible to imagine Brown's hero figuring things out on the run.

Historically, what has been the purpose of codes and ciphers? What sorts of secrets were hidden in them? Is there a "first code" that's been identified?

Codes and ciphers have a very long history—in some ways, as long as written language. They've been used very widely to send military messages, and in spycraft. But they've also been used in many other ways: for example, by lovers who want to exchange love letters in the pages of newspapers. One early and very simple cipher is called the Caesar shift, named after the Roman Emperor Julius Caesar, who reputedly used it. It's a really simple system in which you replace each letter of the text you want to hide with the

letter a fixed number of letters further along in the alphabet.

On Page 184 of the novel, Langdon is faced with a 16-symbol Freemason's cipher. Brown describes the encryption method as having been abandoned long ago because it was too easy to break. Is this true?

Yes, the Freemason's cipher is a very well-known substitution cipher that also goes by other names, including the pigpen cipher. It's such a distinctive system that you certainly would never use it now if you had any important secret to keep. Anyone who has read about codes, ciphers, or symbols would be familiar with it. I certainly was familiar with it, and although I'm far from an expert code breaker, I deciphered the message in a matter of minutes.

Can you explain how an order of eight Franklin square works?

Franklin's squares are a kind of "magic square." These are squares of numbers in which all the rows, columns, and diagonals add up to the same total. So if you draw a square that is eight boxes high and eight boxes across, then you've got a total of 64 boxes. The trick is to arrange the numbers 1 to 64 within those squares so that each row and column adds up to the same number.

Dan Brown mentions the sculpture *Kryptos*, which is in a garden at CIA headquarters. Are there any other codes that have never been broken?

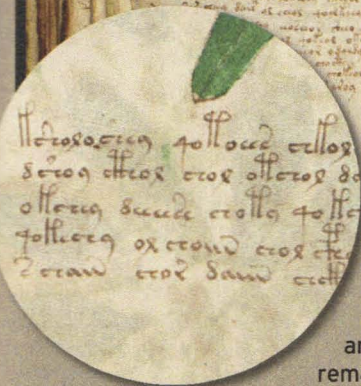
The *Kryptos* sculpture has famously stumped many of the world's great cryptanalysts, and no one has been able to crack those last 97 or 98 characters yet (story, Page 62). As for unsolved codes and ciphers, there are many of

them. Perhaps the most intriguing is the so-called Voynich manuscript, a mystical-looking text consisting of more than 200 pages of script and illustrations that has stumped everyone for hundreds of years.

The Lost Symbol was at one point called *The Solomon Key*, and several of the characters come from the Solomon family. What is a Solomon Key? The Key of Solomon is the name given



TURNING POINT. A circle turns, showing God-Father and Nature-Mother in this tarot magic square.



VOYNICH MANUSCRIPT.

The script and language of this anonymous text remain unknown.

to a handbook of magic attributed to King Solomon that dates from the 14th or 15th century. The code that Langdon finds on the Hand of Mysteries is IIX 885, which turned around is 588 XII, causing the team to realize it's pointing to a location in the Capitol. What sort of code is this?

I don't think I'd call it a code at all, any more than a newspaper would be in code if you held it upside down.

Several other codes and ciphers get brief mentions in the book. What is the Dorabella cipher? The Dorabella cipher refers to a lovely episode from the life of the composer Edward Elgar, who sent an encrypted message to a young friend called Dora Penny. The cipher itself looks like a series of m's, w's, and similar shapes, and at first glance would seem to be pretty easy to unravel. But so far, it has resisted all attempts to decipher it. To me, it has always seemed fitting that the

composer of the "Enigma" variations should have left behind such a riddle.

—Jen Doll

FRANKLIN SQUARE.

The numbers in each row add up to 260, whether they go up or down or sideways.

52	61	4	13	20	29	36	45
14	3	62	51	46	35	30	19
53	60	5	12	21	28	37	44
11	6	59	54	43	38	27	22
55	58	7	10	23	26	39	42
9	8	57	56	41	40	25	24
50	63	2	15	18	31	34	47
16	1	64	49	48	33	32	17

SIGNS OF THE STARS

Almost all the mysterious-looking characters below can be found in *The Lost Symbol*—as part of the magic square Langdon attempts to decipher as he races through Washington in search of his friend Peter Solomon. In reality, they are not arcane at all: simply astrological signs and symbols of the planets. The puzzle they present is solved only after Langdon moves them around, and a message suddenly appears.



—Simon Cox and Amy D. Bernstein

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The Art of 'The Lost Symbol': A DOOR TO THE SACRED FEMININE

There is a concealed entrance to Mal'akh's Kalorama house basement where he conducts his evil experiments in Dan Brown's novel. The door is hidden behind a classically inspired painting, *The Three Graces*. Created by American artist **Michael Parkes**, it is the only contemporary work of art to appear in the novel. Why does Brown introduce it, and what is its significance? Here, the artist himself explains the meaning of his painting and gives some insight into why Brown chose to focus on it.



Tell us what was in your mind when you originally painted *The Three Graces*.

The Three Graces are always connected to Venus (or Aphrodite, if you want to use the Greek name). Venus, through the history of art, takes on different levels or layers of meaning. During the Renaissance, you have paintings of her as a sensual nude. In those images, the Three Graces are shown as handmaidens to this hedonistic Venus, emphasizing themes of desire and fulfillment.

And then the next level up from that, Venus becomes a more noble figure. She now represents human love: love for mankind, harmony, unity, and so on. She moves away from this sensual portrayal and becomes a more humanitarian-type figure. The Three Graces then are often associated with chastity, beauty, and harmony or platonic love.

Plato suggested that the connection of Venus to sexual attraction is irrelevant. What's important about Venus is the way she symbolizes what he called *humanitas*, in other words, the Venus that is giving order, harmony, and beauty to mankind. And then you have the other level, which is Venus the spiritual guide, offering divine love.

I was particularly interested in the space between the humanitarian Venus and the divine love Venus. Within this role, Venus is like the intuitive counsel, nurturing higher ideals and the beauty of the arts. The Three Graces then become the muses of art, literature, and music, so you're up one more rung still. If you continue on this ascending path, you arrive at what Plato called the Venus Urania, or "heavenly Venus," divine love.

This is where the idea of the portal arises in my painting of *The Three Graces*. Everything up until now—the three different stages of interpretation of Venus and the Three Graces—is a normal philosophical discussion. But then you reach the point of divine love, and the door is closed, because you have now arrived at the level of esoteric knowledge. And so you have to go into the esoteric legend of Venus to capture what's going on behind the veil.

And if we go through that portal, what do we find? In various esoteric texts, Venus is connected to the energy of divine creation or feminine active creation. So now you have a deity representing an energy that is descending from the highest plane

down through subtle physical levels to the densest of matter in the earth plane. And she is bringing beauty and order to an earth plane that was in total chaos. She is thus bringing order out of chaos.

In *The Lost Symbol*, one of the most important Masonic axioms is *ordo ab chaos*—"order out of chaos" in Latin.

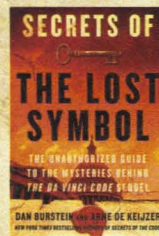
Yes. And as Venus descends through the planes, you can imagine this incredible, subtle, divine energy descending into the dense matter that's getting denser and denser and heavier and darker. In the esoteric texts that I've read, the Three Graces are actually guardians of the three final portals that are opened for Venus to descend into the earth.

Again, no surprise after *The Da Vinci Code*, which emphasized the "sacred feminine" and the role in prehistory of the female goddess, that Brown would find your vision of Venus and the Graces so compelling. What interests you about *The Lost Symbol*, aside from seeing your own work in it?

Dan Brown's basic premise is that we, as humans, also stand as gods. And that's a wonderful concept. The transition between the animal human and the divine human, that's the crux. We have reached a crisis point in our evolution, where we must evolve spiritually if we are to survive. But we can't just do it as a great Buddhist master might. Our own individual spiritual elevation is not the central issue. What's important now is our collective spiritual evolution.

That's when it really becomes interesting, frightening, exciting—all of those things all mixed in together, because it's something that has never happened in the physical plane before. Dan Brown is saying something like: Yes; right here, right now. The secret is here, it's now, and it's happening, so there's no turning back.

From "Venus, the Three Graces, and a Portal to a Divine World," a dialogue with Michael Parkes, in Secrets of the Lost Symbol: The Unauthorized Guide to the Mysteries Behind the Da Vinci Code Sequel edited by Dan Burstein and Arne de Keijzer. Copyright © 2009 by Squibnocket Partners LLC. Published by permission of William Morrow, an imprint of HarperCollins Publishers.



DIVINE BEAUTY.

The Three Graces: Aglaia, Euphrosyne, and Thalia



The Art of 'The Lost Symbol':

AN ANATOMY OF 'MELANCHOLY'

Dürer's *Melencolia I* has intrigued scholars for centuries. Here, **Simon Cox** elucidates its hidden messages.

Midway through *The Lost Symbol*, Robert Langdon and Katherine Solomon are trying to decipher the meaning of some numbers and letters that had been carved into a stone box bearing a capstone. "Fifteen-fourteen AD," she points out, assuming it stands for the year 1514. This is in fact a symbature: a symbol used in place of a signature. Robert Langdon realizes immediately that the A and D following the number are someone's initials—the mark of the artist Albrecht Dürer. Further intuition leads him and Katherine Solomon to Dürer's famous 1514 engraving, *Melencolia I*. One of Dürer's most enigmatic and studied works, *Melencolia I* was unusual in having the title on the plate—on a banner being held by a creature that resembles a rodent-bat-snake hybrid. In the engraving, Dürer has included elements of the science of alchemy: It is full of symbolic references to that practice. The rainbow in the background represents the colors that allegedly appeared during preparation of the philosopher's stone, the instrument needed to transmute base metals such as lead into gold. It was also reputed to have the power to change mortals into an immortal state. More alchemy-related items and other paraphernalia can be seen in the picture, including a crucible, a sphere, woodworking tools, scales, and compasses. Dürer's *Melencolia I* is in many ways a compendium of symbolism, including the faint image of a skull on the face of the polyhedron.

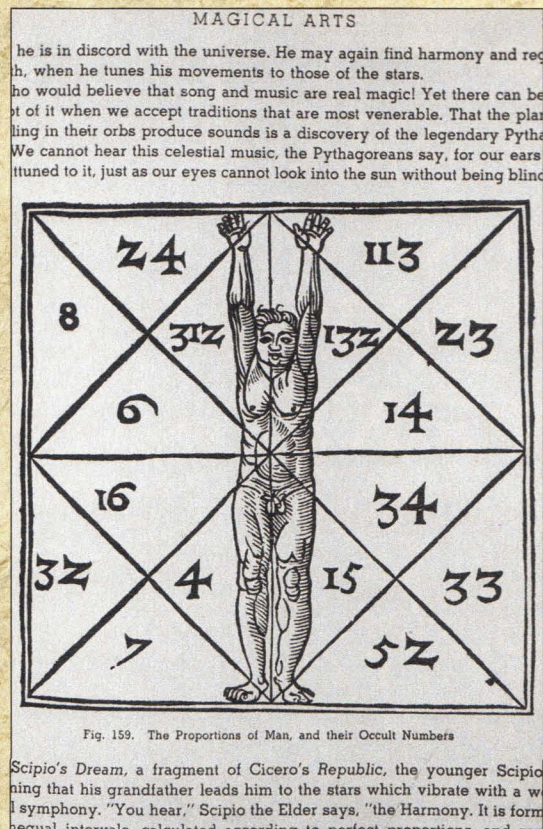
From the Roman numeral I in the title, it seems likely that it was intended to be the first in a series—perhaps of four, since melancholy is one of the four possible human temperaments, the other three being choleric, phlegmatic, and sanguine. The temperaments link the four humors (black bile, phlegm, yellow bile, and blood) to the four elements (earth, air, fire, and water) and to the planets. Physicians, scientists, philosophers, and all those interested in the human condition at the time would have been familiar with, and influenced by, this knowledge. The word *melancholia* actually means "black bile," and it was believed that an imbalance of this in the body would bring about a melancholic disposition. Melancholy was linked to the Earth and to the planet Saturn.

Raymond Klibansky, Erwin Panofsky, and Fritz Saxl in their book *Saturn and Melancholy: Studies in the History of Natural Philosophy, Religion, and Art*, describe the conception of inspired melancholy in Dürer's *Melencolia I* as being directly influenced

by the book *De Occulta Philosophia* by the kabbalist Heinrich Cornelius Agrippa. The influence of Agrippa's work (written by 1510, though not published until 1533) suggests that Dürer had seen an early copy by this master of occult studies. Agrippa had also published a series of magic squares in his work that is mirrored in the *Melencolia*.

Dürer clearly had an interest in mathematics—evidenced by the number square in the *Melencolia*. Immediately below the bell and above the predominant figure is a magic square. The sum of the numbers in each of the four rows and four columns of squares is 34, in all directions. He has cleverly ensured that the year in which he engraved the picture appears in the two central squares in the bottom row: 1514.

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ITS ALL IN THE NUMBERS. A horoscope chart based on a person's bodily shape

COMPENDIUM OF SYMBOLS. Dürer's etching was to be the first in a series.



Cracking the Kryptos Code

A MYSTIFYING BRAINTEASER THAT EVEN THE CIA CANNOT SOLVE

GREEK TO ME.

The *Kryptos* sculpture at the CIA's headquarters



One of the world's toughest unsolved puzzles can be found in a courtyard outside the Central Intelligence Agency headquarters in Langley, Va. But it isn't the work of a cryptographer—merely a mischievous artist from Washington, D.C. His enigmatic sculpture has stumped cryptanalysts for nearly 20 years and fascinated puzzle lovers such as Dan Brown himself, prompting mentions in both *The Da Vinci Code* and *The Lost Symbol*. Here, **Steven Levy** attempts to get to the bottom of James Sanborn's enigmatic sculpture.

The most celebrated inscription at the Central Intelligence Agency's headquarters in Langley, Va., used to be the biblical phrase chiseled into marble in the main lobby: "And ye shall know the truth, and the truth shall make you free." But in recent years, another text has been the subject of intense scrutiny inside the Company and out: 865 characters of seeming gibberish, punched out of half-inch-thick copper in a courtyard.

It's part of a sculpture called *Kryptos*, created by Washington artist James Sanborn. He got the commission in 1988, when the CIA was constructing a new building behind its original headquarters. The agency wanted an outdoor installation for the area between the two buildings, so a solicitation went out for a piece of public art that the general public would never see. Sanborn named his proposal after the Greek word for *hidden*. The work is a meditation on the nature of secrecy and the elusiveness of truth, its message written entirely in code.

Almost 20 years after its dedication, the text has yet to be fully deciphered. A bleary-eyed global community of self-styled cryptanalysts—along with some of the agency's own staffers—has seen three of its four sections solved, revealing evocative prose that only makes the puzzle more confusing. Still uncracked are the 97 characters of the fourth part (known as K4 in *Kryptos*-speak). And the longer the deadlock continues, the crazier people get.

Whether or not our top spooks intended it, the persistent opaqueness of *Kryptos* subversively embodies the nature of the CIA itself—and serves as a reminder of why secrecy and subterfuge so fascinate us. "The whole thing is about the power of secrecy," Sanborn tells me when I visit his studio.

Sanborn's ambitious work includes the 9-foot, 11-inch-high main sculpture—an S-shaped wave of copper with cut-out letters, anchored by an 11-foot column of petrified wood—and huge pieces of granite abutting a low fountain. Although most of the in-

THE CODE

THE KEY

K1 EMUFPHZLRFAXYUSDJKZLDRNSHGNFIVJ
 YQTQUXQBQVYUUVLLTREVJYQTMKYRDMFD
 VFPJUDEEHZWTZYVGVHKKQETGFGQJNCE
 GGWHKK?DQMCPPFQZDQMMIAGPFXHQRLG
 TIMVMZJANQLVKQEDAGDVFRPJUNGEUNA
 QZGZLECGYUXUEENJTBJLBQCRTBJDFHRR
 YIZETKZEMVDUFKJHFKFVHKUWQLSZFTI
K2 HHDDDUVH?DWKBFUFPWNTDFIYCUQZERE
 EVLDKFEZMQQJLTTUGSYQPFUNLAVIDX
 FLGGTEZ?FKZBSFDQVGOGIPUFXHHDRKF
 FHQNTGPAECNUVPDJMQCLQUMUNEDFQ
 ELZZVRGKFFVOEERXBD MVPNFQXEZLGR
 DNQFMPNZGLFLPMBJQYALMGNVXPDXKVP
 DQUMEBEDMHDAFMJGZNUPLGEWJLLAETG

K3 ENDY AHR OHNLSRHEO CPTEOIBIDYSHNAIA
 CHTNREYULDSLSSLNOHSNOSMRWXMNE
 TPRNGATHNRARPELNNLEBLPIIACAE
 WMTWNDITEENRAHCTENEUDRETNAEOE
 TFOLSEDTIWENHAEIOYTEYQHEENCTAYCR
K4 EIFTBRSAMHHEWENATAMATEGYEERLB
 TEEFOASFIOTUETUAEOTOARMAEERTNRTI
 BSEDDNIAAHTTMSTEWPPIEROAGRIEWFEB
 AECTDDHILCEIHSITEGOEAOSDDRYDLORIT
 RKLMLLEHAGTDHARD PNEOHMGFMFEUHE
 ECDMRIPFEIMEHNLSSTTRTVDOHW?OBKR
 UOXOGHULBSOLIFBBWF LRVQQRNGKSSO
 TWTQSQSSEKZZWATJKLUDIAWINFBNYP
 VTTMZFPKWGDKZXTJCDIGKUHUAUEKCAR

ABCDEFGHIJKLMN OPQRSTUVWXYZ ABCD
 A KRYPTOSABCDEFGHIJKLMNQUVWXXZKRYP
 B RYPTOSABCDEFGHIJKLMNQUVWXXZKRYPT
 C YPTOSABCDEFGHIJKLMNQUVWXXZKRYPTO
 D PTOSABCDEFGHIJKLMNQUVWXXZKRYPTOS
 E TOSABCDEFGHIJKLMNQUVWXXZKRYPTOSA
 F OSABCDEFGHIJKLMNQUVWXXZKRYPTOSAB
 G SABCDEFGHIJKLMNQUVWXXZKRYPTOSABC
 H ABCDEFGHIJKLMNQUVWXXZKRYPTOSABCD
 I BCDEFGHIJKLMNQUVWXXZKRYPTOSABCDE
 J CDEFGHIJKLMNQUVWXXZKRYPTOSABCDEF
 K DEF GHIJKLMNQUVWXXZKRYPTOSABCDEF
 L EFGHIJKLMNQUVWXXZKRYPTOSABCDEF
 MFGHIJKLMNQUVWXXZKRYPTOSABCDEFGHI

NGHIJKLMNQUVWXXZKRYPTOSABCDEFGHIJL
 O HIJKLMNQUVWXXZKRYPTOSABCDEFGHIJL
 P IJKLMNQUVWXXZKRYPTOSABCDEFGHIJLM
 Q JLMNQUVWXXZKRYPTOSABCDEFGHIJLMN
 R LMNQUVWXXZKRYPTOSABCDEFGHIJLMNQ
 S MNQUVWXXZKRYPTOSABCDEFGHIJLMNQU
 T NQUVWXXZKRYPTOSABCDEFGHIJLMNQV
 U QUVWXXZKRYPTOSABCDEFGHIJLMNQVW
 V UVWXXZKRYPTOSABCDEFGHIJLMNQVWX
 W VWXXZKRYPTOSABCDEFGHIJLMNQVWXX
 X WXZKRYPTOSABCDEFGHIJLMNQVWXXZ
 Y XZKRYPTOSABCDEFGHIJLMNQVWXXZKR
 Z ZKRYPTOSABCDEFGHIJLMNQVWXXZKRY
 ABCDEFGHIJKLMN OPQRSTUVWXYZ ABCD

'KRYPTOS' KEY.

James Sanborn's cryptogram is above, at left; a substitution key is at right.

stallation resides in a space near the CIA cafeteria, where analysts and spies can enjoy it when they eat outside, *Kryptos* extends beyond the courtyard to the other side of the new building. There, copper plates near the entrance bear snippets of Morse code, and a naturally magnetized lodestone sits by a compass rose etched in granite. The heart of the piece, though, is the encrypted text, scrambled, Sanborn says, by "a coding system that would unravel itself slowly over a period of time."

When he began the work, Sanborn knew very little about cryptography, so he reluctantly accepted the CIA's offer to work with Ed Scheidt, who had just retired as head of Langley's Cryptographic Center. Scheidt himself was serving two masters. "I was reminded of my need to preserve the agency's secrets," Scheidt says. "You know, don't tell him the current way of doing business. And don't create something that you cannot break—but at the same time, make it something that will last a while."

Scheidt schooled Sanborn in cryptographic techniques employed from the late 19th century until World War II, when field agents had to use pencil and paper to encode and decode their messages. (These days, of course, cryptography is all about rugged computer algorithms using long mathematical keys.) After experimenting with a range of techniques, including poly-alphabetic substitution, shifting matrices, and transposition, the two arrived at a form of old-school, artisanal cryptography that they felt would hold off code breakers long enough to generate some suspense. The solutions, however, were Sanborn's alone, and he did not share them with Scheidt. "I assumed the first three sections would be

deciphered in a matter of weeks, perhaps months," Sanborn says. Scheidt figured the whole puzzle would be solved in less than seven years.

Sanborn finished the sculpture in time for a November 1990 dedication. The agency released the enciphered text, and a frenzy erupted in the crypto world as some of the best—and wackiest—cryptanalytic talent set to work. But it took more than seven years, not the few months Sanborn had expected, to crack sections K1, K2, and K3. The first code breaker, a CIA employee named David Stein, spent 400 hours working by hand on his own time. Stein, who described the emergence of the first passage as a religious experience, revealed his partial solution to a packed auditorium at Langley in February 1998. But not a word was leaked to the press. Sixteen months later, Jim Gillogly, a Los Angeles-area cryptanalyst, used a Pentium II computer and some custom software to crack the same three sections. When news of Gillogly's success broke, the CIA publicized Stein's earlier crack.

The first section, K1, uses a modified Vigenère cipher. It's encrypted through substitution—each letter corresponds to another—and can be solved only with the alphabetic rows of letters of the key (in the illustration above). The keywords, which help determine the substitutions, are KRYPTOS and PALIMPSEST. A misspelling—in this case IQLUSION—may be a clue to cracking K4.

K2, like the first section, was also encrypted using the alphabets on the right. One new trick Sanborn used, though, was to insert an X between some sentences, making it harder to crack the code by tabulating letter frequency. The keywords here are

KRYPTOS and ABCISSA. And there's another intriguing misspelling: UNDERGRUUND.

A different cryptographic technique was used for K3: transposition. All the letters are jumbled and can be deciphered only by uncovering the complex matrices and mathematics that determined their misplacement. Of course, there is a misspelling (DESPARATLY), and the last sentence (CAN YOU SEE ANYTHING?) is strangely bracketed by an X and a Q.

Sanborn intentionally made K4 much harder to crack, hinting that the plain text itself is not standard English and would require a second level of cryptanalysis. Misspellings and other anomalies in previous sections may help. Some suspect that clues are present in other parts of the installation: the Morse code, the compass rose, or perhaps the adjacent fountain.

The 97 characters of K4 remain impenetrable. They have become, as one would-be cracker calls it, the Everest of codes. Both Scheidt and Sanborn confirm that they intended the final segment to be the biggest challenge. There are endless theories about how to solve it. Is access to the sculpture required? Is the Morse code a clue? Every aspect of the project has come under electron-microscopic scrutiny, as thousands of people—hard-core cryptographers and amateur code breakers alike—have taken a whack at it. Some have gone to extreme lengths: A Michigan man abandoned his computer-software business to do construction so he'd have more time to work on it. Thirteen hundred members of a fanatical Yahoo group try to move the ball forward with everything from complex math to astrology. One typical *Kryptos* maniac is Randy Thompson, a 43-year-old physicist who has devoted three years to the problem. "I think I'm on to the solution," he says. "It could happen tomorrow, or it could take the rest of my life." Meanwhile, some of the seekers are getting tired. "I just want to see it solved," says Elonka Dunin, a 50-year-old St. Louis game developer who runs a clearinghouse site for *Kryptos* information and gossip. "I want it off my plate."

For years, there has been a delicate pas de deux between the artist and the rabid *Kryptos* community. Every word Sanborn utters is eagerly examined for hints. But the code breakers also have to wonder whether he's trying to help them or throw them off track. Scheidt says that this process parallels the work of the CIA: "The intelligence picture includes mirrors and obfuscation."

Though Sanborn's usual practice is to stay in the background, every so often he feels obliged to comment. In 2005, he

refuted author Dan Brown's claim that the "WW" in the plain text of K3 could be inverted to "MM," implying Mary Magdalene. (Brown included pieces of *Kryptos* on the book jacket of *The Da Vinci Code* and hinted that his next novel, *The Lost Symbol*, which has now been published, would draw on the CIA sculpture, a prospect that deeply annoyed Sanborn.)

The official story is that Sanborn shared the answer with only one person, the CIA director at the time, William Webster. Indeed, the decoded K3 text reads in part, "Who knows the exact location only ww." Sanborn has confirmed that these letters refer to Webster (not Mary Magdalene). And in 1999, Webster himself told the *New York Times* that the solution was "philosophical and obscure."

But Sanborn also claims that the envelope he gave Webster didn't contain the complete answer. "Nobody has it all," he says. "I tricked them."

SANBORN SAYS THAT EVEN HE DOESN'T KNOW THE EXACT SOLUTION ANYMORE.



So Webster really doesn't know?

"No," says Sanborn, who has taken measures to ensure that someone will still be able to confirm a successful solution after he dies. He adds that even he doesn't know the exact solution anymore. "If somebody tried to torture me, I couldn't tell them," he says. "I haven't looked at the plain text of K4 in a long time, and I don't have a very good memory, so I don't really know what it says." What does the CIA make of all this? "When it comes to the solution," says a spokesperson, "those who need to know, know."

If anyone manages to solve the last cipher, that won't end the hunt for the ultimate truth about *Kryptos*.

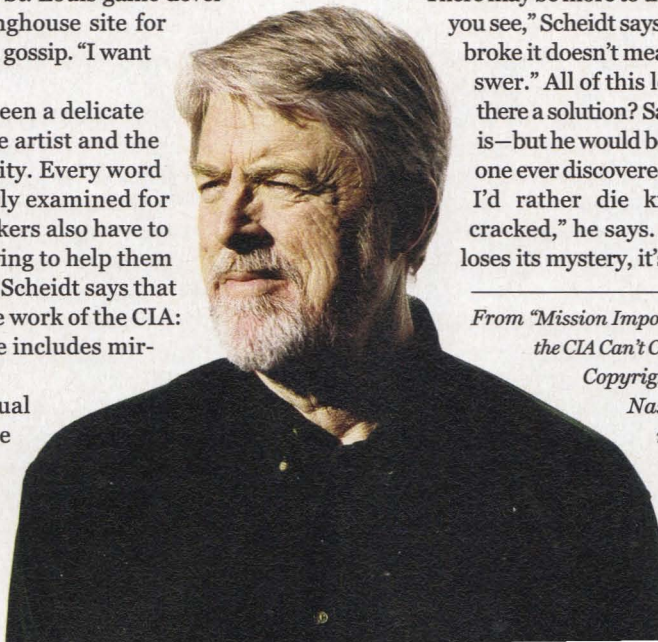
"There may be more to the puzzle than what you see," Scheidt says. "Just because you broke it doesn't mean you have the answer." All of this leads one to ask: Is there a solution? Sanborn insists there is—but he would be just as happy if no one ever discovered it. "In some ways, I'd rather die knowing it wasn't cracked," he says. "Once an artwork loses its mystery, it's lost a lot."

From "Mission Impossible: The Code Even the CIA Can't Crack" by Steven Levy.

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MASTER OF DECEPTION.

Almost 20 years later, Sanborn's *Kryptos* is not yet solved.





The Mystery of TATTOOS

ARCHAEOLOGISTS NOW REALIZE THAT THE REASONS FOR THIS ANCIENT PRACTICE WERE FAR MORE THAN JUST SKIN-DEEP

In *The Lost Symbol*, nearly every inch of archvillain Mal'akh's massive body is covered with tattoos: a double-headed phoenix with talons, a snake, Masonic pillars, and more. Though such body art might seem out of place on a member of the Establishment in modern-day Washington, the fact is that humans have marked their bodies with tattoos for various reasons—as status symbols, declarations of love, and amulets, among others—for thousands of years. Here, **Joann Fletcher**, research fellow in the department of archaeology at the University of York in Britain, discusses some of the history and cultural significance of tattoos around the world, from the famous “Iceman,” a 5,200-year-old frozen mummy, to today's Maoris.



What is the earliest evidence of tattoos?

In terms of tattoos on actual bodies, the earliest known examples were for a long time Egyptian and were present on several female mummies dated to c. 2000 B.C. But following the more recent discovery of the Iceman from the area of the Italian-Austrian border in 1991 and his tattoo patterns, this date has been pushed back a further thousand years when he was carbon-dated at around 5,200 years old.

Can you describe the tattoos on the Iceman and their significance?

My colleague Prof. Don Brothwell of the University of York, one of the specialists who examined him, discovered the distribution of the tattooed dots and small crosses on his lower spine and right knee and ankle joints, which suggest that they may have been applied to alleviate joint pain and were therefore essentially therapeutic.

What is the evidence that ancient Egyptians had tattoos?

There's certainly evidence that women had tattoos on their bodies and limbs—from figurines c. 4000 to 3500 B.C. to occasional female figures represented in tomb scenes c. 1200 B.C. and figurine forms c. 1300 B.C., all with tattoos on their thighs. Also, small bronze implements identified as tattooing tools were discovered at the town site of Gurob in northern Egypt and dated to c. 1450 B.C. And then, of course, there are female mummies with tattoos dated to c. 2000 B.C. and later examples of women with these forms of permanent marks found in Greco-Roman burials at Akhmim, near Sohag, Egypt.

What function did these tattoos serve? Who got them, and why?

Because this seemed to be an exclusively female practice in ancient Egypt, mummies found with tattoos were usually dismissed by the (male) excavators, who seemed to assume the women were of “dubious status,” described in some cases as “dancing girls.” The female mummies had nevertheless been

BODY ART. A man displays Maori tattoos, at left; above, a Maori woman with traditional leg designs.

buried at Deir el-Bahri (opposite modern Luxor) in an area associated with royal and elite burials, and we know that at least one of the women described as “probably a royal concubine” was actually a high-status priestess named Amunet, as revealed by her funerary inscriptions.

I believe that the tattooing of ancient Egyptian women had a therapeutic role and functioned as a permanent form of amulet during the very difficult time of pregnancy and birth. This is supported by the evidence of tattoos that, applied over the abdomen in a largely netlike pattern of distribution of dots, would expand in a protective fashion during pregnancy. The placing of small figures of the household deity Bes at the tops of their thighs would again suggest the use of tattoos as a means of safeguarding the actual birth, since Bes was the protector of women in labor. This would ultimately explain tattoos as a purely female custom.

What did these tattoos look like?

Most examples on mummies are largely dotted patterns of lines and diamond patterns, while figurines sometimes feature more naturalistic images. The tattoos occasionally found in tomb scenes and on small female figurines also have small figures of the dwarf god Bes on the thigh area. **Can you describe the tattoos used in other ancient cultures and how they differ?**

Among the numerous ancient cultures that appear to have used tattooing as a permanent form of body adornment are the Nubians to the south of Egypt. The mummified remains of women found in cemeteries near Kubban c. 2000 to 1500 B.C. had blue tattoos, which in at least one case featured the same arrangement of dots across the abdomen noted on the female mummies from Deir el-Bahri discussed above. The ancient Egyptians also portrayed the male leaders of their Libyan neighbors c. 1300 to 1100 B.C. with clear, rather geometrical tattoo marks on their arms and legs in Egyptian tomb, temple, and palace scenes.

The Scythian Pazyryk of the Altai Mountain region were another ancient culture that employed tattoos. In 1948, the 2,400-

year-old body of a Scythian male was discovered preserved in ice in Siberia, his limbs and torso covered in ornate tattoos of mythical animals. Then, in 1993, a woman with tattoos, again of mythical creatures on her shoulders, wrists, and thumb and of similar date, was found in a tomb in Altai. The practice is also confirmed by the Greek writer Herodotus c. 450 B.C., who stated that among the Scythians and Thracians “tattoos were a mark of nobility....”

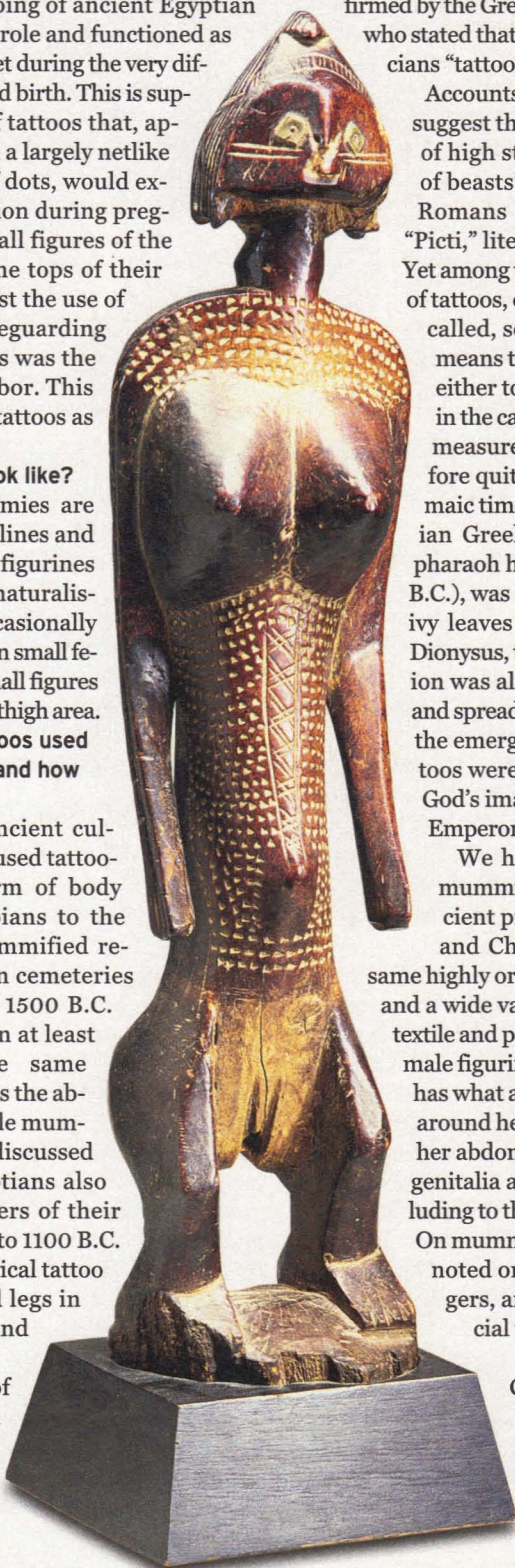
Accounts of the ancient Britons likewise suggest they too were tattooed as a mark of high status, and with “divers shapes of beasts” tattooed on their bodies, the Romans named one northern tribe “Picti,” literally “the painted people.”

Yet among the Greeks and Romans, the use of tattoos, or “stigmata,” as they were then called, seems to have been largely as a means to mark someone as “belonging” either to a religious sect or to an owner in the case of slaves or even as a punitive measure to mark criminals. It is therefore quite intriguing that during Ptolemaic times when a dynasty of Macedonian Greek monarchs ruled Egypt, the pharaoh himself, Ptolemy IV (221 to 205 B.C.), was said to have been tattooed with ivy leaves to symbolize his devotion to Dionysus, the Greek god of wine. The fashion was also adopted by Roman soldiers and spread across the Roman Empire until the emergence of Christianity, when tattoos were felt to “disfigure that made in God’s image” and so were banned by the Emperor Constantine (A.D. 306 to 337).

We have also examined tattoos on mummified remains of some of the ancient pre-Columbian cultures of Peru and Chile, which often replicate the same highly ornate images of stylized animals and a wide variety of symbols found in their textile and pottery designs. One stunning female figurine of the Naszca culture in Peru has what appears to be a huge tattoo right around her lower torso, stretching across her abdomen and extending down to her genitalia and, presumably, once again alluding to the regions associated with birth. On mummified remains, the tattoos were noted on torsos, limbs, hands, the fingers, and thumbs, and sometimes facial tattooing was practiced.

American Indians, such as the Cree, used extensive facial and body tattooing. The mummified bodies of a group of six Greenland Inuit women c. A.D. 1475 also revealed evi-

CONNECTING THE DOTS. The marks shown on this Malian statue were most likely used on real women for protective purposes.



dence of facial tattooing. Infrared examination revealed that five of the women had been tattooed in a line extending over the eyebrows, along the cheeks, and in some cases with a series of lines on the chin. Another tattooed female mummy, dated 1,000 years earlier, was found on St. Lawrence Island in the Bering Sea, her tattoos of dots, lines, and hearts confined to the arms and hands.

Evidence for tattooing is also found among some of the ancient mummies from China's Taklamakan Desert c. 1200 B.C., although during the later Han dynasty (202 B.C. to A.D. 220), it seems that only criminals were tattooed.

The tattoos of the Polynesian cultures are thought to have developed over millennia, featuring highly elaborate geometric designs, which in many cases can cover the whole body. Following James Cook's British expedition to Tahiti in 1769, the islanders' term *tatatau* or *tattau*, meaning to hit or strike, gave the West our modern term *tattoo*. The marks then became fashionable among Europeans, particularly in the case of men such as sailors or coal miners, whose professions carried serious risks—explaining the almost amuletlike use of anchors or miner's lamp tattoos on the men's forearms.

What about modern tattoos outside of the Western world?

The Japanese art of tattooing began among men in the third century A.D. and has engendered real works of art, with many modern practitioners. In Samoa, highly skilled tattooists continue to create their art as it was carried out in ancient times, prior to the invention of modern tattooing equipment. Various cultures throughout Africa also employ tattoos, including the fine dots on the faces of Berber women in Algeria, the elaborate facial tattoos of Wodaabe men in Niger, and the small crosses on the inner forearms that mark Egypt's Christian Copts.

And then there are the Maori tattoos. What do those facial designs represent?

In the Maori culture of New Zealand, the head was considered the most important part of the body, with the face embellished by incredibly elaborate tattoos, or *moko*, regarded as marks of high status. Each tattoo design was unique to that individual, and since



it conveyed specific information about status, rank, ancestry, and abilities, it has accurately been described as a form of ID card or passport, a kind of aesthetic bar code for the face.

Why do you think so many cultures have marked the human body—and did their practices influence one another?

In many cases, tattooing seems to have sprung up independently as a permanent way to place protective or therapeutic symbols upon the body, then as a means of marking people as part of social, political, or religious groups or simply as a form of self-expression or fashion statement.

From "Tattoos, the Ancient and Mysterious History," an interview with Joann Fletcher by Cate Lineberry. Copyright © 2009 Smithsonian Institution. Reprinted with permission from Smithsonian Enterprises. All rights reserved. Reproduction in any medium is strictly prohibited without permission from Smithsonian Institution. Such permission may be requested from Smithsonian Enterprises.

PICTURE PERFECT. Traditional Ikuza tattoos in Tokyo



Spy Tech

HOW REAL ARE THE CIA
CHARACTERS—AND THEIR
CUTTING-EDGE GADGETRY—
IN 'THE LOST SYMBOL'?

**CAUGHT IN THE
CROSS HAIRS.**

A target seen
through an
infrared lens

From the daunting, BlackBerry-toting Inoue Sato, head of the CIA's security office, to agents wielding cutting-edge spyware, the agency plays a sizable role in Dan Brown's new book. His CIA is an odd blend of technological wizards and New Age types who specialize in psychic phenomena. What's true, what's exaggeration, and what's sheer fabrication on Brown's part? Master Langley-ologist **Jeffrey T. Richelson** has written extensively about the CIA, including a 2001 book, *The Wizards of Langley*, which reveals some of the successes and failures of the legendary Directorate of Science and Technology, developer of spy tools for intelligence gathering.

Brown refers to the staff of the CIA's Directorate of Science and Technology as "the Wizards of Langley," also the title of your 2001 book. Is the directorate a sort of American version of James Bond's Q Branch—Ian Fleming's fictitious R&D division of the British secret service?

It's actually much more than that. One section, the Office of Technical Services, is very much like Q Branch. It produces disguises, hidden weapons, covert communication devices, and secret writing tools. But the directorate's responsibilities are much more extensive. It has developed emplaced sensors, such as seismic or nuclear detection devices that can be installed near a facility; mobile sensors, such as mechanical fish and birds, to gather nuclear or other intelligence; manned and unmanned spy aircraft; and a wide variety of satellites. With the National Security Agency, its staff also operates eavesdropping equipment in U.S. embassies.

The CIA, says Brown, experimented with "remote viewing," or telepathic mind travel, for intelligence gathering. What can you tell us about the agency's foray into psychic research?

The CIA was one of several agencies that attempted to obtain intelligence by hiring people allegedly capable of "viewing" distant sites without leaving the country, simply by focusing on the coordinates. In one of the better-known cases in the mid-1970s, a "remote viewer" focused on a secret Soviet site about 60 miles southwest of the Semipalatinsk nuclear test site. An official who later evaluated the experiment said the viewer provided an almost perfect description of the site's operations area. But the evaluator also noted that the viewer reported seeing nine other objects that did not appear at or near the facility.

The CIA itself ended its remote viewing and other parapsychology research in 1976, but some military intelligence agencies conducted similar

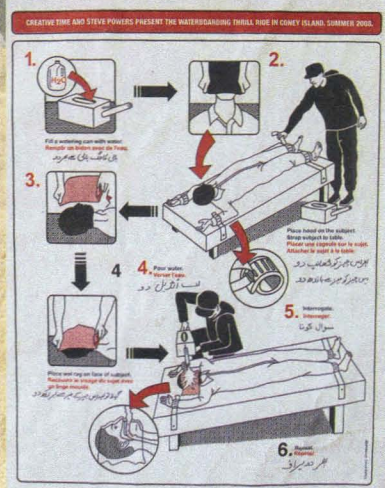
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DAN BROWN'S FORENSICS 101

There is no lack of gory detail in *The Lost Symbol*, from an amputated hand, to a simulated drowning, to a needle that slowly drains blood from the novel's heroine. Do Dan Brown's graphic details withstand medical scrutiny? Noted forensic expert **Cyril H. Wecht**, who has performed more than 17,000 autopsies and consulted on more than 36,000 cases of suspicious death, says that for the most part, Brown has done his research.

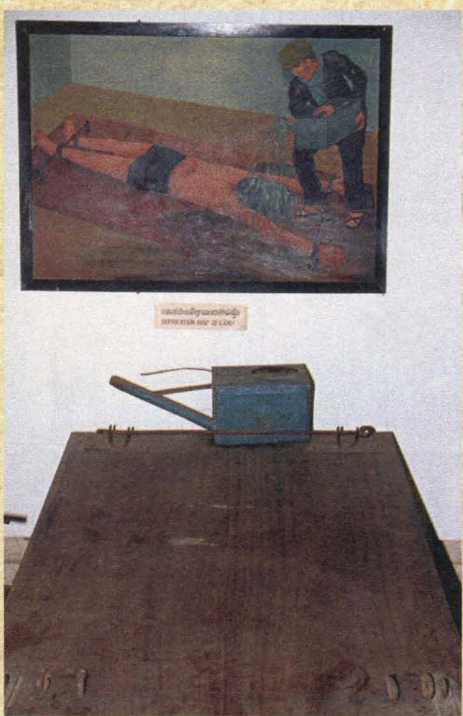
Peter Solomon's severed hand is placed in the middle of the Capitol Rotunda. Robert Langdon notes a pool of blood at the base and concludes that Peter is still alive since "postmortem wounds don't bleed." Is that an accurate deduction? Yes. Postmortem wounds do not bleed. A dead person, even after a few minutes, has no pumping of the heart and no circulation. Wounds may seep a little, depending on which vessels have been cut, but there will be no real bleeding. What can happen to a person whose hand is more or less crudely amputated and who receives no immediate

professional medical attention? The wrist has two significant arteries—the ulnar and the radial—both branches of the brachial artery that comes from the shoulder level. These two are medium sized, not major, vessels. If the hand is severed at the wrist and there is no surgeon tying off the vessels and no tourniquet applied or stitches put in, then the person would lose a fair amount of blood. There would be some degree of weakness as a result of the loss of blood, but you would probably retain consciousness for some time. You might even survive without treatment if clotting occurs, the arm is held in an upward position, and nothing disrupts the clots, which could be easily broken. But, yes, you could survive that injury. Would Peter Solomon be well enough, after 24 hours or so, to be in the Washington Monument, poised to descend nearly 900 steps? Solomon is lean and in his 50s. If the bandage is tight and thick, restricting bleeding, and clotting has taken place, it would be possible for someone to continue to function. Langdon finds himself in a tank of oxygenated perfluorocarbons, or "breathable liquid," and believes he is drowning—presumably not unlike the sensation a victim of torture by waterboarding might feel. What could



WATERBOARDING. Above, an explanation of the torture method; below, the Genocide Museum in Cambodia

happen to a person submerged in the liquid? Fluorocarbons are used as aerosol propellants and refrigerants like freon. When they are oxygenated, you have "breathable liquid." Experiments with rats and mice swimming around in this stuff found that they got the benefit of the oxygen. It can keep you alive while you are submerged in it. You do get the sensation of drowning because you don't know you're receiving oxygen, and you will get the same panicky experience as with waterboarding. But the oxygen benefits will not continue to play out indefinitely. How long the oxygen can sustain you is unclear. Mal'akh injects Katherine Solomon with a needle that slowly draws her blood. Would death come within one hour, as the villain states? It all depends on the size of the needle and the size of the vein. If it's a tiny-bore needle, less blood would flow out, and if it's placed in a small vein, you may well have some clotting occurring. So, under those conditions, I would say it's not likely that death would occur within one hour. But the situation is different if you use a large-bore needle that allows for significant blood flow, and it was placed in a large vein, like a carotid or femoral. —A.G.I.



experiments into the mid-1990s, which led to the Stargate/Scanate scandal. "Stargate" was the last in a series of code names used by several military intelligence agencies for their remote-viewing program. ("Scanate" is a contraction of Scanning by Coordinate, that is, remote viewing by giving the "viewer" the position of the target site.)

In 1994, one of the agencies planned to terminate its Stargate program. Some of the program's congressional supporters, among them Rhode Island Sen. Claiborne Pell, who was sometimes referred to as the "senator from outer space," tried to pressure the CIA into resuming funding for such activities, believing the tests had intelligence potential. But a nonprofit group was brought in to review the program and concluded that there was "a compelling argument" to kill it. So, the government's psychic friends network was shut down.

To foil the novel's characters, CIA agents use an arsenal of gadgets, among them laser weapons, thermal-imaging goggles that give agents "superhuman" eyesight, and "Silly String" to immobilize a person. How common are those technologies?

Laser-guided weaponry is common today—from laser-guided bombs to rifles with lasers to assist in hitting targets. The United States has made considerable efforts to exploit portions of the electromagnetic spectrum that are not visible to the human eye, including the so-called far-infrared portion that can be used to produce thermal images. Because such images are produced by reflected heat, even residual heat, images can be formed of a person or object even, as Brown says, after the location has been abandoned. Much of the effort has been dedicated to providing soldiers and presumably intelligence officers with night-vision capability. The Army's Night Vision and Electronic Sensors Directorate at Fort Belvoir, Va., is key in producing such equipment.

Silly String, a polymer-based resin shot out of an aerosol can that hardens in the air, has been used in Iraq to detect invisible tripwires. If tripwires are present, it falls on them without triggering the explosive device. Another product, Sticky Foam, is one of many nonlethal weapons developed for police or military use. Like Silly String, it's propelled into the air and can be used to entangle individuals. It's been used by the Marines and U.N. peacekeepers in Somalia.

Toward the end of the book, agents hovering in a UH-60 helicopter blast a 10-gigawatt electromagnetic pulse at a laptop inside a D.C. building to fry

its hard drive and stop the transmission of a highly sensitive document. Is that a plausible scenario?

I don't know whether that exact scenario is possible. But it is certainly true that an electromagnetic pulse, whether generated by a nuclear or nonnuclear weapon, can destroy vital electronic equipment and interrupt communications. It has been a concern of U.S. national security officials for years.

What do you consider to be the directorate's greatest folly and biggest success during its 45-plus years? And are its employees still the Wizards of Langley?

Its remote-viewing program is probably its greatest folly, closely followed by a late-1960s project called "Acoustic Kitty," which attempted to use cats as mobile eavesdropping devices by surgically outfitting them with microphones. In its first



run, the bugged cat was run over by a taxi.

The directorate has had many successes, including technology that has been used commercially for pacemakers and for detecting breast cancer. But at the top of the list for intelligence gathering, I would place its role in developing imagery satellites, both film-return and today's electro-optical real time, and signals intelligence satellites, which intercept communications as well as signals from missile tests. The satellites have provided, and continue to provide, a wealth of intelligence about the military activities of other nations.

It will be years before we can say if today's employees are truly wizards, given the top-secret nature of their work—although no doubt al Qaeda is giving them more than sufficient opportunity to show their ingenuity.—*Anna G. Isgro*

FLYBY. An unmanned reconnaissance aircraft, or drone, in Camp Ghazni, Afghanistan



Cosmic

CAN MODERN SCIENCE LEARN FROM AGE-OLD TEACHINGS?



Can today's scientists really find answers in the texts of ancient mystics, as Dan Brown suggests in *The Lost Symbol*? Can science ever unequivocally prove, or disprove, what religion has long preached, as Katherine Solomon's experiments supposedly do? Here, **Marcelo Gleiser**, a re-

search scientist and professor of physics, astronomy, and natural philosophy at Dartmouth College and the author, most recently, of *A Tear at the Edge of Creation: Searching for the Meaning of Life in an Imperfect Cosmos* (due out in spring 2010), helps unravel the tangled nature of science and religion.

In *The Lost Symbol*, heroine Katherine Solomon works in the field of cosmic consciousness. What is this consciousness, and how does modern science treat the concept?

Cosmic consciousness, I would suppose, means that there exists a cosmic "mind" and that we are all somehow part of it, like drops of water in an ocean. There are a few proposals on the fringes of theoretical physics that suggest something of the sort. The universe has a kind of built-in sense of purpose, and we—that is, intelligent humans (and possibly other intelligent aliens)—are the result.

Having said that, at this point there is absolutely no evidence pointing to a "mindful" universe. The notion is more an expression of a wish for a connection with the universe—a cosmic spirituality, so to speak—than real science.

Noetic science, or the study of consciousness and human thought, is a "fusion of modern particle physics and ancient mysticism," according to

TWO WORLDS.

A messenger from beyond (above); right, the cosmos according to Paracelsus



**UNDERWORLD.**

Divine Osiris leads a dead person to Anubis, god of the afterlife.

Brown. What do you make of that notion?

Brown is not the first to suggest this connection. Books like *The Tao of Physics* by Fritjof Capra and *The Dancing Wu Li Masters* by Gary Zukav have tried to establish a parallel between modern physics (that is, relativity and quantum mechanics) and ancient Eastern mysticism. Brown's innovation is to bring in Western mysticism. It's an entertaining idea, but no one should believe that Egyptian and Jewish mystic traditions, or alchemical knowledge, important and fascinating as they are, have a connection with particle physics.

Brown is a master at building a case for this relationship—it is so compelling that we feel we must take it seriously. But we shouldn't. The effects of particle physics are limited to subatomic distances and have no bearing in macroscopic reality. Even the property known as quantum entanglement, a connection that can be built between two systems that is sustained across large spatial distances, is extremely difficult to maintain for complicated systems. Of course, we don't

know what may happen in the future, but as it stands now, the connection is nonexistent. If there is a point in common, it is that both ancient mystics and modern physicists are trying to do the same thing: make sense of the world. The crucial difference is that while for mystics the "world" includes supernatural entities, for physics, it does not.

So Peter Solomon's notion that "entanglement" was at the core of man's quest to perceive "his own interconnection with things" is not a valid interpretation of entanglement theory?

In quantum mechanics, an entangled state combines two or more entities in such a way that they cannot be seen as separate anymore. In a sense, while entangled, they are one. Separation only happens when there is external interference. For example, two entangled electrons spinning in opposite directions will remain entangled unless something interacts with them.

New Age idealists, eager to construct a pseudoscientific connection between reality and spirituality, can easily exploit the conceptual murkiness of entanglement and make people gawk with amazement: Science is proving that we are one with reality, that we are inseparable from the cosmos! Just like the wisdom of the ancients told us! As I mentioned before, many books have been written about this. I'd say that there is, indeed, an interconnection. But—and it's a big *but*—it doesn't have anything to do with entanglement and quantum mechanics. These quantum states are easily destroyed as systems interact with their surroundings, which is exactly what life is about. In a sense, the business of being alive spoils the purity of entanglement.

On the other hand, we can feel at one with reality and be close to all living creatures and the cosmos. This kind of spirituality is perfectly fine and inspiring, as it reveals how deeply we are related to the cosmos. We don't need to use concepts from quantum mechanics out of context to justify our connection with the world. All we have to do is look around and pay attention.

What about polarity, or the positive and negative balance of the subatomic world? Is it not, as Brown says, comparable to the "dual world" described by Krishna in the Bhagavad Gita more than 2,000 years ago?

Again, the language in sacred texts renders itself amenable to all sorts of interpretations. Of course, there is polarity in our description of the world. We see it all the time: night-day, cold-hot, male-female, earth-sky. These polarities will appear in sacred texts and will also appear in our scientific narrative. Whenever there are bound states, that is, things held together, there has to be an attraction between them. Calling them positive and negative is a very convenient way to describe it.

Brown also claims that superstring theory, the current thinking that the universe is made up of 10 di-



tremely long commentary of the Torah. We are talking about thousands of pages—the Talmud, for example—describing many ways of interpreting the Jewish sacred text. Sacred texts are murky and open to interpretation even by believers.

Superstring theory is a very Platonic theory, inspired by the concept of underlying symmetry and order in the material world. You may or may not agree with its premises, but it's definitely not a spin-off from the Zohar, even if some ideas may sound vaguely similar. As Katherine Solomon sees it, human thought has mass and gravity and can actually be measured. She, like noetic scientists, believes that many individuals focusing their thoughts can actually affect world events. Is this possible?

Brown uses a great analogy with gravity to explain this: Just as Earth's mighty gravity can be thought of as the sum of the gravitational action of all its little bits of rock and other stuff, so too would the power of human thought add up if focused together like light by a lens. "United we win," so to speak. I like to think of Brown's book as itself being a symbol of his optimistic vision for humanity: that, together, we can make a difference for the better. In this sense, I am fully with him. How-

SOOTHSAYER'S PYRAMID.

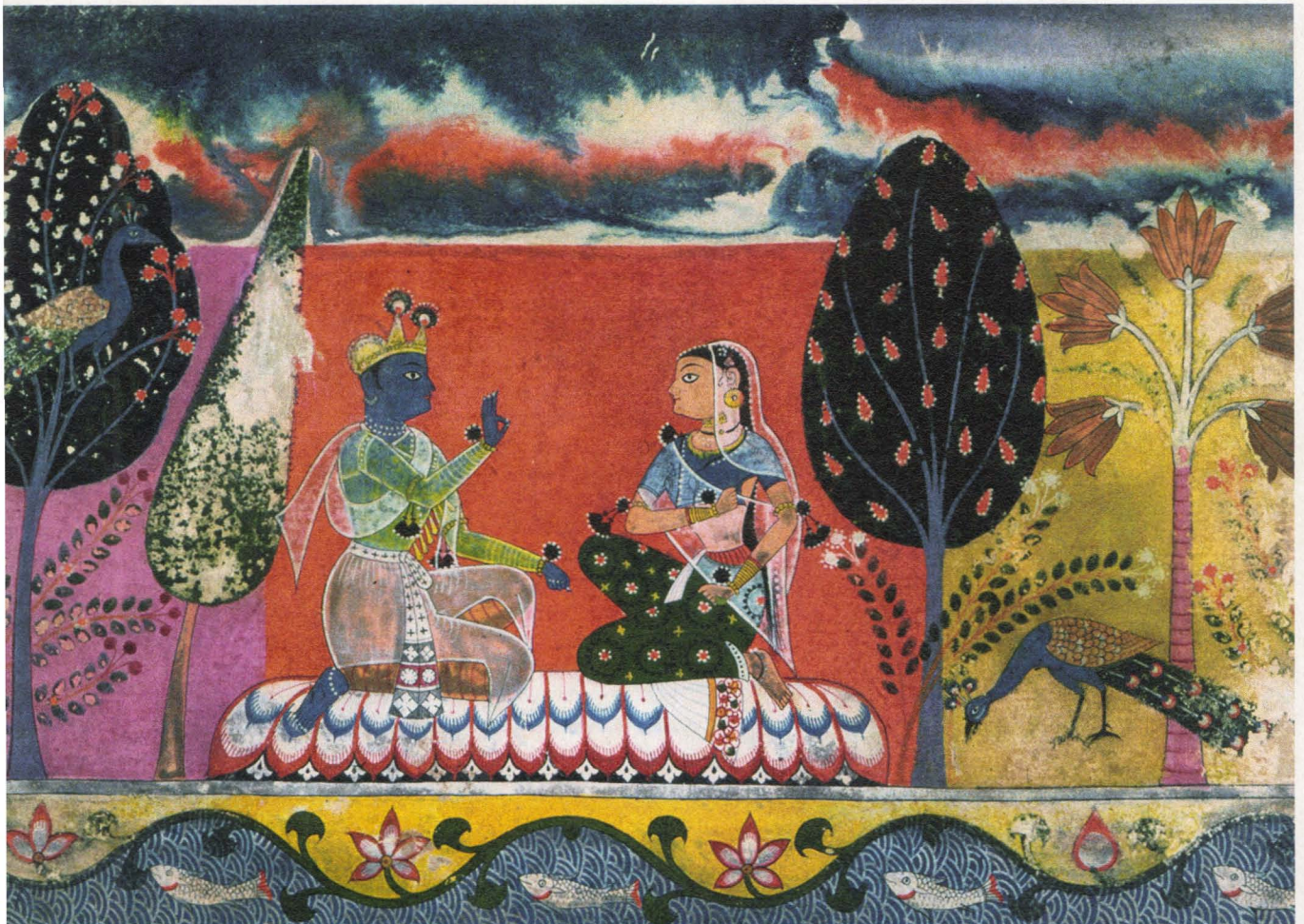
Mayan priests stargazing atop temples like this (left) predicted that the world would end in 2012.

mensions, all interacting like "vibrating strings, similar to resonating violin strings," as he puts, is also described in the Zohar, the text of early Jewish mysticism.

It's ludicrous to think that an amazingly sophisticated mathematical theory can be directly compared to a mystic text. Words can do all sorts of things and can be interpreted in many different ways. It's no coincidence that Jewish knowledge is based on an ex-

COMPANIONS.

Gods Krishna and Radha in a depiction of the poem *Gita Govinda*





Edgar Mitchell at the time of his space launch on the Apollo mission

AN EPIPHANY IN OUTER SPACE

In *The Lost Symbol*, Peter Solomon's sister, Katherine, is an expert in noetic science who conducts mind-bending experiments about how the human mind interacts with matter. While Katherine's ideas might sound improbable, even nutty, to a layperson, noetics in fact explores some of the most advanced and sophisticated areas of current scientific inquiry and has been getting a lot of attention from serious scientists for decades. Here, **Lou Aronica** tells the dramatic story of Edgar Mitchell, an astronaut who had a life-changing experience in outer space and returned to Earth determined to help fund and further the study of noetics.

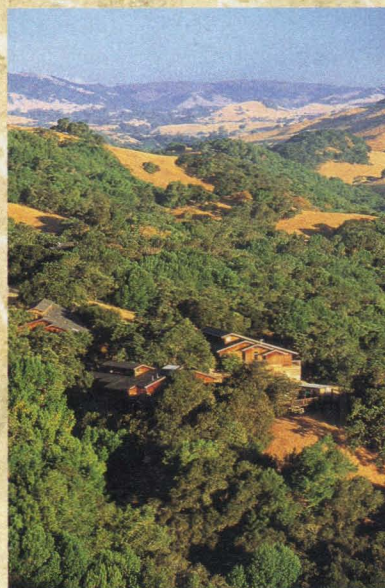
Noetic science gained tremendous momentum—and its name—in the early '70s, literally from a cosmic source. Astronaut Edgar Mitchell was a member of the crew of Apollo 14, which embarked on a nine-day mission that included two days exploring the surface of the moon. Mitchell was dazzled by his extraterrestrial jaunt, but it was the return trip that turned out to be truly life-changing. A view of the Earth from space struck him with a sense that everything was connected in ways he'd never understood before. "The presence of divinity became almost palpable," Mitchell said. From that moment, he added, "I knew that life in the universe was not just an accident based on random processes. ... The knowledge came to me directly."

Once Earth-bound, Mitchell became committed to seeking deeper truths than his scientific training had afforded him up to that point. He believed that he needed to explore the inner space of consciousness with as much passion as he had devoted to exploring outer space, and that accessing a new combination of the empirical and conjectural would lead to a new understanding of our universe. His goal was to create a laboratory for exploring the "inner world of human experience."

The Institute of Noetic Sciences, the real-life institute founded by Mitchell and others in 1973, is referred to by the same name in *The Lost Symbol*. The term *noetic* derives from the Greek word *noesis*. It was defined by philosopher William

James more than a century ago as "states of insight into depths of truth unplumbed by the discursive intellect. They are illuminations, revelations, full of significance and importance, all inarticulate though they remain; and as a rule they carry with them a curious sense of authority." IONS, located in Petaluma, Calif., has sponsored hundreds of projects (its website lists "a comprehensive bibliography on the physical and psychological effects of meditation, an extensive spontaneous remission bibliography, and studies on the efficacy of compassionate intention on healing in AIDS patients" among them). IONS has nearly 30,000 members and 300 associated community groups around the world.

From "Noetics: The Link Between Modern Science and Ancient Mysticism?" by Lou Aronica from the book Secrets of the Lost Symbol: The Unauthorized Guide to the Mysteries Behind the Da Vinci Code Sequel edited by Daniel Burstein and Arne de Keijzer. Copyright © 2009 by Squibnocket Partners LLC. Published by permission of William Morrow, an imprint of HarperCollins Publishers.



The IONS campus in California

ever, the notion that our minds can affect events is, as far as we know, bogus. What we can do is to use our thoughts to act responsibly and enact change. For example, voting in an election, in a sense, does that.

If it were found that mind can affect matter from a distance (it does so locally every time your brain orders your body to do something), that would be really transformative. The other aspect, that we are all gods and just need to tap into our hidden powers, is really exciting but far-fetched. Brown claims that if thought can alter matter, then we can affect the way cells age and, in principle, become immortal with the power of thought alone. Wouldn't it be wonderful if it were true, to have the answer to our mortality within us? So far, the best we can do is to keep a positive attitude and, as the poet Dylan Thomas wrote, "rage, rage against the dying of the light." **So you don't buy into Brown's notion that our brains, if used correctly, can summon superhuman powers?**

It's a novel, not a nonfiction book describing real research. As such, it attracts readers by its premises and concepts. Who wouldn't want to be godlike? There is, however, a sense where Brown is right. We are the only animals capable of self-awareness, of coming up with a concept of God, for example. This ability does set us apart from all other life-forms we know. We are special in this way, and, for this very reason, we have a tremendous responsibility: to use our superior brainpower to preserve what we have. If we do that, and if we continue to create all these technologies that extend our powers, we are, in a practical, nonsupernatural sense, acting like "gods." **As a physicist, do you believe that there is any room for the paranormal in science?**

In spite of many tests and experiments, clairvoyance and telekinesis have not been proven. Those who claim to have the "powers" also claim that lab settings disturb them. That's unfortunate because if their powers were true, science could never study them. So it's not that science has anything against the paranormal. It's simply that its effects refuse to reveal themselves to scientists.

What do you make of Katherine's "work" in devising a system to weigh the human soul?

When I was an undergraduate student in the late 1970s, I devised an experiment to weigh the soul. Yes, I wanted to do in real life what Katherine did in the novel. I proposed that what was needed was a very sensitive scale and devices capable of measuring slight fluctuations in electromagnetic fields—essentially what was done in Katherine's video. My friends thought I was losing my mind. But I wanted to see what science could say about this ponderous topic. Of course, I was only half-serious, and I also knew I would never find a willing dying patient.

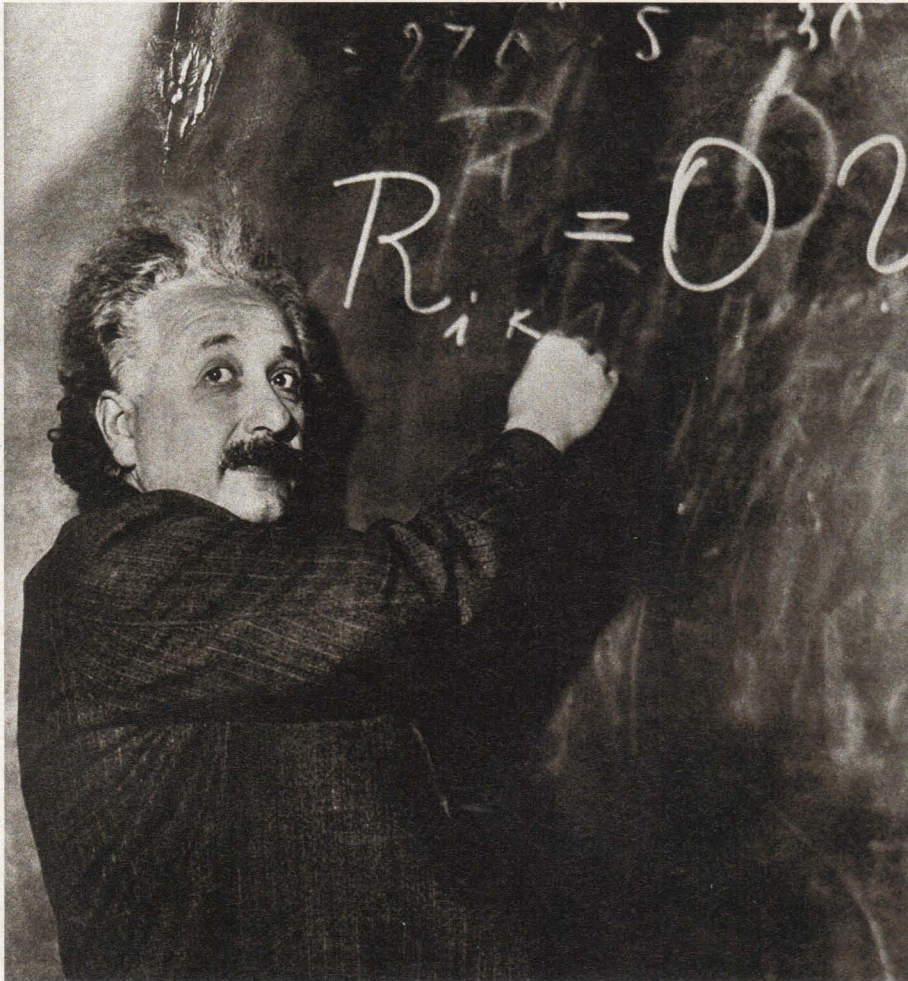
But there was a Dr. Duncan MacDougall of Massachusetts who, in 1907, did the experiment, as re-

ported in the *New York Times*. He concluded, with very faulty methodology, that dogs do not have a soul and that the human soul weighs 21 grams (hence the 2003 movie *21 Grams* starring Sean Penn). As far as I know, there are no serious attempts on the part of the scientific community to replicate the experiment. **A strong apocalyptic theme runs through Brown's book. Every faith has predicted a coming enlightenment—the Day of Atonement for Christians and Dec. 21, 2012, for the Mayans, for example. Even cosmologists, he says, refer to a "harmonic convergence." What's behind this belief?**

This actually raises one of the few errors in the book—that cosmologists refer to a "harmonic convergence." I know of nothing of the sort. Of course, as I described in my book *The Prophet and the Astronomer: Apocalyptic Science and the End of the World*, end-of-time notions abound in science: The Earth can be hit by an asteroid, the sun will explode one day, the universe may collapse. Our time here is limited in a human and a cosmic sense. "We are creatures bound by time," I wrote, and, as such, we are always trying to find ways to cheat death. Resurrection would be the final redemption, the time

21 GRAMS. A medieval view of an angel and a devil weighing a soul





UNVEILING MYSTERIES.
Albert Einstein teaching in Pasadena, Ca.

when we become immortal, as gods. Behind this belief is the hope that one day we will finally break loose from the cycle of life and death.

Brown often quotes Albert Einstein to illustrate that the scientist was also a religious man. Is that an accurate portrayal of Einstein?

Yes. Einstein was religious, even though not in the

infrastructure, concepts, and assumptions. We should also be aware that we will always have limited knowledge of the world. There is only so much that we can see and measure. Beyond the reach of our instruments, there is our ignorance. And who knows what lurks out there?

—Anna G. Isgro

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