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EARMUFFS

SOMETIMES A GREAT idea comes when one least expects it. For Chester Greenwood, a flash of inspiration happened while ice skating on Abbot Pond in Maine; it was a particularly frigid day in December 1873. Fifteen-year-old Greenwood wanted to test out his new skates, but the icy wind rushing by his ears cut short his fun.

Most people in those days prevented cold ears by tying a wool scarf or muffler around their heads. Unfortunately, the wool caused Greenwood’s ears to itch and the muffler was not secure enough to enjoy winter sports. Undeterred, Greenwood asked for his grandmother’s help in fashioning something to keep his ears warm. Greenwood’s design included farm wire (a precursor of bailing wire) for the headband and a combination of fur and velvet to cover the ear. His grandmother sewed it together while Greenwood shaped the headband with a pair of pliers, and the prototype of the first earmuff was born.

As one of six children helping out on his family’s farm, he sold eggs door-to-door along an eight-mile route to raise extra money. Sometimes he made candy or fudge to sell as well. But once he began wearing his ear protectors, as Greenwood called them, his life went in a new direction. His peers asked their parents for earmuffs, and before long, everyone in the small community of Farmington, Maine, wanted a pair. The following winter, Greenwood was mass producing his Greenwood Champion Ear Protectors.

Young and old alike were wearing Greenwood’s self-proclaimed “blizzard-proof” earmuffs, but he wasn’t satisfied. He made two important changes to his invention. The first was to solve the problem of the muff flapping too much. Greenwood attached a hinge to each side to keep it flush against the ear. A byproduct of this change was that the earmuff could now be folded and stored in a pocket. Then Greenwood substituted the farm wire in the headband for flat, spring steel. “I believe perfection has been reached”, he said and never made another alteration to his design.

On 13 March 1877, the US Patent Office awarded Greenwood with patent #188,292 for his invention. He was just 18 years old. Greenwood soon opened a
circulated, turned over to brown both sides and rolled out of the oil on a moving ramp. He set up a donut machine in a shop window in Times Square, New York that drew so many onlookers, it caused traffic to come to a halt.

Soon, Levitt sold machines to small shops and large baking companies all over America. By this time, he was doing a 25-million dollar a year business. Levitt’s next step was to manufacture the mix for the donuts. He started more bakeries, opened restaurants to sell the donuts and created advertising to sell them. During WWII, he rented machines to the Red Cross so the soldiers could have donuts.

Donut machines grew to be more refined and many other companies produced their own version of Levitt’s machine.

Today, some 300 million donuts are consumed in the US. In Canada, Tim Horton’s, famous for its donuts, has twice as many stores in the country as McDonald’s. — SANDRA MCGARRITY

factory which produced 30,000 earmuffs per year and employed 20 people full-time. The business continued to flourish and expanded to a downtown shop. In 1936, Greenwood Champion Ear Protectors was making 400,000 earmuffs annually. Even after most of the manufacturing process was automated, the factory still relied upon hand labor. It seemed the only way to attach the muff to the headband was the way his grandmother had done it — by hand.

Greenwood continued to turn his ideas into inventions, and by the time he died in 1937, he had been granted more than 130 patents. The Smithsonian Institute named Greenwood as one of America’s 15 outstanding inventors of the 20th century.

Each year in December, the state of Maine celebrates Chester Greenwood Day to honor the man who found a way to keep our ears warm. — JACQUELIN CANGRO

Today earmuffs come in a variety of colors and sizes.

A full index of History Magazine’s past articles can be found at http://www.history-magazine.com/historyindex.html.
THE DEMAND FOR coal skyrocketed during Europe’s industrial revolution, and inventors sought ways to extract coal from previously inaccessible sites. In 1839, Charles-Jean Triger, a French mining engineer, devised a method of excavating a rich vein of coal buried under quicksand at Chalonnes. Triger had a 70-foot-long metal tube — a caisson — built in a mine shaft. Using compressed air, he drove water and sand from the caisson and cleared a space for miners. The miners entered and exited the pressurized shaft through an airlock on the surface.

A French company used a caisson to evacuate underground water from a mine. The technology overcame the difficulty of installing a drainage machine with a capacity greater than that of incoming water currents. The new technique had a price: miners experienced severe pain in their arms, chest and legs. Two men died.

In 1854, two physicians, Pol and Watelle, published a treatise on the effects of air compression. The danger does not lie in entering a mine under compressed air, they observed. “You only pay when you leave.”

British engineers adapted Triger’s caisson technology to sink piers that supported bridges. Basically, workers built the shell of a pier in a large box or tube, which was closed at the top. After sinking the caisson — open end first — into the river bed, compressed air forced water from the caisson. Toiling in pressurized air, the men dug to the bedrock. To form the pier’s core, workers poured concrete into the caisson’s interior.

While traveling through Europe, American engineer James Buchanan Eads observed the use of compressed air caissons. In 1869, he used the technology to build the first bridge across the Mississippi River at St. Louis. Problems arose. At about 55 feet below the surface, men had joint pains while they dug out the riverbed. As they continued to dig, they experienced painful paralysis of their legs. Eleven caisson workers died in five months. Eads shortened the workers’ hours and called for his personal physician, Alphonse Jaminet. Despite the doctor’s efforts, another nine men died from compressed air exposure.

In September 1871, Washington Roebling started work on the New York caisson of the Brooklyn Bridge. Borings indicated that bedrock lay from 77 to 92 feet below the surface. Every two feet translated into an additional pound of pressure.

By late January, the caisson reached a depth of 51 feet, and workers experienced serious health problems. Roebling commissioned Dr. Andrew H. Smith to help his men. During the next four months, Smith, who coined the term “caisson disease”, treated men for the mysterious illness. Roebling himself suffered from caisson disease which he received while working on the Brooklyn Bridge and was permanently affected by it.

On 18 May 1872, the caisson reached a depth of 78½ feet. Three men had died from caisson disease. Aware of the St. Louis Bridge tragedies, Roebling stopped excavation. He gambled that the tower on the New York side could stand on sand. Smith treated 110 reported cases of caisson disease. Undoubtedly, the disease had affected many more men, who feared that a reported illness would ban them from future projects. Workers kept to themselves if they had a dose of the Grecian Bends, a name shorten to the “bends” and inspired by the Grecian Bend stance, a fashionable forward bent posture of women who wore the restrictive corsets, crinolines and bustles of the period.

Smith, Pol and Jaminet correctly focused on rapid decompression as the cause of caisson disease. After a work shift in a caisson, the drop in atmospheric pressure caused dissolved nitrogen to form bubbles in the workers’ bodies. A rapid decompression overwhelmed their lungs’ ability to expel the gas. Consequently, nitrogen bubbles hindered the flow of oxygen to tissues, causing intense pain and even permanent damage.

Today, decompression sickness, as caisson disease is now known, usually affects pilots of unpressurized aircraft and underwater divers. Sufferers are placed in recompression chambers; however, the damage is sometimes irreversible. — PHILL JONES
The First Decade of the 1500s
Victoria L. King explores the legacy of a period that still lingers

In many ways, the events and accomplishments of the first decade of the 16th century remain relevant today in the 21st century.

The artistic giants of the Renaissance, Leonardo da Vinci and Michelangelo, created works in this decade which are still revered. Da Vinci’s *Mona Lisa*, believed to have been painted between 1502 and 1505, is the world’s most famous portrait. The masterpiece is celebrated for its enigmatic subject, and has set a standard against which all other portraits have been compared. The painting, now five centuries old, continues to fascinate.

Michelangelo’s work on the Sistine Chapel’s ceiling frescos was also begun in this decade. The artist, who considered himself primarily a sculptor, depicted scenes and figures from the Bible which are still admired for their drama and beauty.

Christopher Columbus, the world-famous explorer, undertook his final voyage in this period, dying shortly afterwards. His “discovery” of the New World changed the course of history forever. Other explorers also made their marks on the map in this decade. The coasts of Newfoundland and Brazil were explored and islands in the Atlantic and Indian oceans were discovered.

Another famous figure from this period was Cesare Borgia. The natural son of Pope Alexander VI, the ambitious Borgia sought to create a kingdom for himself in Italy. Borgia’s ruthless determination brought him many successes; however, it came at a price. He was betrayed, and when his father died, Borgia quickly lost all that he had gained. Years later, Borgia’s cold, calculating style became inspiration for one of the most notorious books of all time, Machiavelli’s *The Prince*.

Another notable legacy from this decade is the ubiquitous and humble portable timekeeping device known as the watch. The first watch more resembled a large egg than what we are familiar with today. However, the invention of the watch allowed society to leap forward, much as new inventions (usually) make our lives easier now.

The events described here happened five centuries ago. However, so much of what occurred in this decade still resonates today.

History Magazine • February/March 2008
1500: Pope Alexander VI declares the year a Holy Year of Jubilee and authorizes various celebrations.

Christopher Columbus returns from his third trip to the New World.

France and Spain agree to invade and divide the spoils of Italy between themselves. The French agree to the northern portion, including Naples, and Spain the southern.

Gaspar Corte-Reali visits the coast of Newfoundland, naming several places. Several Natives are kidnaped and sent to England.

Surviving an assassination attempt, Alfonso, Duke of Bisciglie, husband of Lucrezia Borgia and son-in-law of Pope Alexander VI, recovers in Rome. However, a servant of his brother-in-law Cesare Borgia, later strangles him.

The coast of present-day Brazil is explored by Portugal’s Pedro Álvares Cabral.

1501: Amerigo Vespucci sails along the coast of South America, and concludes that the land mass is a new continent.

Ascension Island in the South Atlantic is discovered. The island remains uninhabited until 1815.

Pursuing a dynastic claim, France, with the assistance of Spain, conquers Naples.

The Danube River floods, submerging one-story buildings.

The Portuguese become the first to bring Asian spices to Europe via the Cape of Good Hope.

1502: Arthur, Prince of Wales, dies. His widow, Catherine of Aragon is betrothed to Henry, Arthur’s younger brother. However, due to rivalry between Spain and England, the marriage does not take place for several years.

Christopher Columbus leaves on his fourth trip to the New World.

Cochin, a small fishing village on the southwest coast of India, becomes a Portuguese trading station and an important port of Portugal’s Asian trading route.

James IV of Scotland marries Margaret, daughter of Henry VII of England, as part of their “treaty of perpetual peace”. Their descendants eventually unite the two countries.

Cesare Borgia

Cesare Borgia was born in Rome in the mid 1470s, the son of Cardinal Rodrigo Borgia and his mistress, Vannozza Catanei. While a child, Pope Sixtus IV legitimized the young Cesare, so he could hold ecclesiastical office. This was quickly taken advantage of, as the seven-year-old Cesare was made canon of the Cathedral of Valencia. Cesare went on to be bishop of Pamplona and then became archbishop of Valencia shortly after his father became Pope Alexander VI in August 1492, all of which happened before Cesare was 20 years old.

Although much of Cesare’s success was due to his father, Cesare was considered brilliant and “the handsomest man in Italy”. Early in his father’s pontificate, Cesare was made an archbishop and, in 1496, Alexander made his son commander of the papal army.

Despite this, Cesare was more known for his clothes and romances than for his piousness, and when his younger brother was murdered in 1497, it was rumored that Cesare had done the nefarious deed. Despite the rumors, Alexander still relied on Cesare and began making plans for a marriage alliance for him with the sister of Jean d’Albret of Navarre, Cesare gave up his cardinalship accordingly. With the support of Navarre, Alexander and Cesare began to reassert papal dominance over Italy using military might. By 1502, Cesare had enjoyed a number of successes. However, he was not popular.

Cesare was seen as a power hungry man, capable of great cruelty. He was determined to create his own kingdom in Italy, while he had the chance. Cesare’s involvement with the murder of his younger sister’s husband in 1500 did little to help his reputation.

In 1503, Cesare’s commanders, fearing his growing power, conspired against him and stripped him of his followers. With the financial aid of his father, Cesare rebuilt his forces. Cesare then entered into negotiations with his former commanders. A meeting was arranged where Cesare promptly had the former commanders arrested and executed on 31 December 1502.

The death of Alexander on 18 August 1503 marked the decline of Cesare’s fortunes. Cesare was also ailing at the time and unable to take advantage of the situation. In October, Giuliano Della Rovere, an enemy of the Borgias, became Pope Julius II. Julius refused to support Cesare and had him arrested. After agreeing to surrender his conquests, Cesare was allowed to go free. He went to Naples seeking support, only to be rearrested. He was imprisoned, but escaped in 1506. Cesare joined his brother-in-law’s army, but died in battle in 1507.

Cesare Borgia might have simply been a minor figure in the tumultuous 16th century, a man feared in his day and then forgotten. However, Cesare was immortalized in Niccolò Machiavelli’s 16th-century classic work of political thought, The Prince. Unlike many of his contemporaries, Machiavelli seemed to admire Cesare. He worked for Cesare and saw firsthand how he controlled and manipulated situations to his advantage. Machiavelli’s literary portrait of Cesare is a testament to the man who wanted to be a king.
The *Mona Lisa* is arguably the world’s most famous painting. Begun sometime around 1502 and worked upon for four years by the Italian genius Leonardo da Vinci, today the painting is instantly recognizable.

The oil painting is believed to be of the wife of Francesco del Giocondo, thus the painting’s nickname, La Gioconda. Giocondo was a cloth merchant and in the Florentine government, and both he and his wife, Lisa, were art lovers. If the painting is of Lisa del Giocondo, it is believed to have been painted around the time of the birth of her second son.

The subject is seated against a background of mountains and rivers, the shapes of which are echoed in the sitter’s hair and clothing. Da Vinci used a shading technique called “sfumato”, which involves the layering of coats of paint to create depth in a work. The repetition creates harmony in the painting. The seated woman is smiling faintly; many suggest that her eyes are happier than her mouth, which may explain her enigmatic expression.

However, the painting was unfinished. According to Giorgio Vasari, who wrote in 1550, “after he [Da Vinci] had lingered over it four years, [he] left it unfinished.” A receipt or indication of payment for the painting has never been found. Da Vinci took the painting with him to France in 1516, when the 65-year-old painter was invited there by King Francis I. While in France, Da Vinci worked on the painting, but stopped shortly before his death. When Da Vinci died in France in 1519, the painting became the property of the king.

During the reign of Louis XIV, the *Mona Lisa* was moved to Versailles. Napoleon had the portrait hung in his bedroom. Then the *Mona Lisa* was given a spot in the Louvre and became a popular work due to the Symbolist art movement, which praised the painting for its embodiment of femininity. Despite her new home, the *Mona Lisa*’s adventures were not over. In August 1911, the portrait was stolen. It remained lost for two years until a former Louvre employee, Vincenzo Perugia, was arrested for the crime. Perugia, an Italian nationalist, thought the famous painting deserved to be in Italy. On 21 August 1911, Perugia had found himself alone with the portrait in the gallery room, took the painting off its hooks and walked out with it under his coat. He had smuggled the painting back into Italy to sell it to an Italian museum. When the Uffizi Gallery of Florence was approached to buy the painting, they contacted the Louvre. The *Mona Lisa* was returned to France in 1914 and Perugia was imprisoned for the theft, but only served a few months.

The year 1956 was not a good one for *Mona Lisa*. The portrait had acid thrown on it and then a rock tossed at it, resulting in the portrait having to undergo restoration. It is believed that an earlier restoration had removed the eyebrows and eyelashes that once graced the sitter. (However, it was also common in the early 16th century for women to pluck off their eyebrows, so the *Mona Lisa* may never have had them.)

In the 20th century, the *Mona Lisa* traveled to the US, the former USSR and Japan. The painting is probably more famous now than ever before. The *Mona Lisa* has appeared in movies, songs and books, including Dan Brown’s book, *The Da Vinci Code*, which features the portrait and has sold more than 64 million copies.

Also, recent study of the painting has kept the *Mona Lisa* in the spotlight. It was discovered that the subject is wearing a translucent gauze garment called a *guarnelo* over her dress. The *guarnelo*, as painted by Da Vinci is undetectable to the naked eye. A *guarnelo* was worn by pregnant women or by those who had just given birth, which gives some support to the theory of the subject being Giocondo.

Today, the painting is on display in the Louvre Museum in Paris, behind bullet-proof glass, and is viewed by some six million people a year.
The Ceiling of the Sistine Chapel

Above: God creating Adam, as envisioned by Michelangelo.
Right: A self-portrait of Michelangelo painting the Sistine Chapel.

The Papal Sistine Chapel was completed in 1481 for Pope Sixtus IV. The Chapel in the Vatican Palace is famous for its frescoes by Michelangelo and other celebrated artists. Frescoes are created by applying water-based paint to fresh plaster, which is absorbed and becomes part of the wall or ceiling surface.

The frescoes on the walls of the Sistine Chapel were begun in the 1480s by leading artists of the day, such as Sandro Botticelli, famous for painting The Birth of Venus. These wall frescoes depicted the lives of Christ and Moses. Above these, on the same level as the chapel windows, were popes, two on either side of each of the 12 windows.

When Michelangelo began working on the Sistine Chapel’s ceiling in 1508, he was only 33 years old and still in the early stages of his career. (Michelangelo was almost 89 years old when he died in 1564.) Up until then, Michelangelo was primarily known for his sculpture, and it was this medium that he saw himself most associated with throughout his long career. By this time Michelangelo was well-known, and had already completed two sculptures, the Pietà and David, which are still famous today.

Despite being unfamiliar with fresco painting, Michelangelo was commissioned to finish the ceiling. Nine scenes from the Old Testament, such as God dividing light from darkness, the creation of Adam and the Flood, were depicted by Michelangelo. Along the sloping sides, where the ceiling met the wall, prophets and sibyls are shown, with the ancestors of Christ between them, just above the inner windows. In the four corners of the sloped ceiling are stories concerning the salvation of the Jews, as told in the Bible.

To access the ceiling, a scaffold was erected. At first, guidelines and drawings were used in the work. However, these aids were abandoned as Michelangelo became more confident in his skills. The work took four years, with a brief break in the middle. The Sistine Chapel’s ceiling fresco was probably finished sometime in October 1512, as Pope Julius II celebrated mass in the chapel on 1 November 1512.

Giorgio Vasari, Michelangelo’s 16th-century biographer, said “The whole world came running when the vault was revealed, and the sight of it was enough to reduce them to stunned silence.”

Michelangelo returned to the Sistine Chapel to work on a fresco concerning the Last Judgment from 1534 to 1541.

Today, the Sistine Chapel is used by the Sacred College of Cardinals for their papal elections and has some 10,000 visitors a day. Recently, the frescoes have been cleaned and restored, removing centuries of smoke and dirt.
When Christopher Columbus returned from his third voyage to the New World in 1500, he was in chains. This was a dramatic change from what had happened only seven years earlier with the homecoming of his first voyage, when Columbus, as Admiral of the Ocean Sea, was at the height of his powers.

Columbus’ sponsors, Isabella of Castile and Ferdinand of Aragon, had been delighted with the reports of riches in the New World, along with the precious metals, exotic creatures, spices and human captives he brought back to Spain in 1493. However, the enchantment did not last. The monarchs were disappointed with the results of the second voyage (1493–96). The Europeans left behind from the first voyage in the New World had been killed by the Natives. Columbus’ subordinates also began to complain of his harsh methods as governor. Most importantly to the monarchs, the investment in Columbus’s second voyage was not recouped.

However, the temptation of possible riches meant that funding for a third voyage was granted. Columbus set sail in 1498 with high hopes. However, they were soon dashed. The passage to India remained elusive. Columbus and his brothers, who were also involved in the venture, were becoming unpopular due to their ruthless ways, with both the Europeans and the Natives. When a chief justice arrived to investigate what was happening in the New World, he had the three Columbus brothers arrested and sent back to Spain.

During the voyage home, Columbus wrote a letter to Isabel-la and Ferdinand. He stated that he believed he had reached the Earthly Paradise and that the riches it held would soon be found. When Columbus reached Spain, the Spanish monarchs removed Columbus as governor. However, his past successes meant that he was allowed to lead a fourth voyage to the New World.

The voyage began on 9 May 1502, with just four ships, a far cry from the 17 vessels that embarked on the second voyage. Columbus was instructed to avoid Hispaniola, where many of the problems had previously occurred, and instead search for a sea passage to India. Columbus, however, disobeyed and made for Hispaniola. Turned away by the new governor, Columbus reluctantly returned to his mission.

During this voyage, Columbus explored the islands of Jamaica and Cuba and along the coasts of Honduras, Nicaragua, Costa Rica and Panama. However, the adventurers were plagued with bad luck. Two of the ships were abandoned as unseaworthy. The crews were twice caught in violent storms while at sea, including what is believed to have been a hurricane, and were eventually beached as castaways on the coast of Jamaica. Men were sent to Hispaniola to get help, which was over 400 miles of open sea. While waiting for the rescuers to come, Columbus predicted a lunar eclipse with the help of astronomical tables, and frightened the Natives into helping them with food.

Help did not arrive for several months and it was late 1504 when Columbus finally returned to Spain as a disappointed and broken man. He came back to learn that his greatest supporter, Queen Isabella, was dying. In addition, evidence that Columbus had not, in fact, reached Asia was mounting. Although a rich man from his successes in the New World, Columbus felt he was shortchanged and spent part of his remaining time trying to get an audience with Ferdinand of Aragon.

Columbus died on 6 May 1506, convinced that what he had discovered was a route to Asia.

Today, it is well known that Columbus was not the first European to reach the Americas. However, these earlier Europeans had failed to maintain links to the New World. After Columbus’ first voyage, the European powers began to take notice of what lay to the west, beginning a new chapter in history.
The Invention of the Watch

In the early years of the 16th century, a German locksmith from Nuremberg named Peter Henlein (or Hele) invented a portable timekeeping device, which is considered the first watch.

Very little is known of Henlein, who died sometime in 1542. Like many locksmiths, Henlein dabbled in other fields and he took care of the local clocks of churches and the town hall. Apparently, in 1504, after being involved in a violent scuffle that ended a man’s life, Henlein fled to a Franciscan monastery for protection. He stayed for several years and it is believed he invented a portable timepiece while there.

Various sources give different dates for the invention, all within the early years of the 16th century. However, a work from 1511, called the Cosmographia Pomponii Melaee states the following: “Every day now they invent more subtle things: Peter Hele (Henlein) of youthful age, executes works that raise the admiration of mathematicians, viz., he makes watches from iron with many wheels, that, however, they are worn, in the stomacher or in the purse will show and strike the hour during forty hours.”

Henlein used a spring to drive the portable timepieces. The use of a spring allowed the timepiece to be smaller than traditional clocks and thus portable. As the tightly wound spring relaxed, it drove the timekeeping mechanism. However, because the force exerted by the spring decreased as it uncoiled, the timekeeping was irregular.

Prior to this, timepieces were stationary. Mechanical clocks were weight-driven and difficult, if not impossible, to move; sundials needed to be in the same place or the readings were inaccurate. Water clocks were also difficult to move, notched candles were expensive and inaccurate. The necks of hourglasses became worn after repeated uses, allowing sand to flow more quickly and distorting time telling.

Despite the drawbacks of the early portable watches, they were considered status symbols.

These timepieces, later nicknamed “Nuremberg Eggs” due to their shape, measured about four to five inches in diameter and about three inches in depth and could be carried about in the hand.

These early timekeeping devices were made of iron or steel, but later watches were made of brass and steel and these timepieces chimed the hour. They also lacked a minute hand, which was not invented until the late 17th century, and also did not have a glass face, also introduced in the 17th century.

Watches became more popular as they became more reliable in keeping time. The invention of the fusee in the mid-16th century made spring-driven time devices more accurate. The fusee is a cone-shaped grooved pulley that compensates for the lessening of the force of the spring, delivering constant pressure. Portable timekeeping devices also became necessary in the age of navigation, as they were needed for determining longitude at sea.

It has recently been reported that the sale of watches has decreased as people are now relying on their cellular phones, Blackberries, iPods and computers to tell the time.
The She-She-She Camps of the Great Depression

Jane Kahramanidis looks at Eleanor Roosevelt’s attempts to keep the women of America busy during the Great Depression

It was a cloudy June morning in 1933 as 17 young women, 20 to 35 years of age, boarded a bus in New York City. None of them knew what to expect at the end of their journey and, for most, it was their first trip into the country.

Each woman, victimized by the Great Depression, had been determined by the government to be appropriately destitute, single and unemployed to qualify for a camp vacation at the taxpayer’s expense. In fact, this group, consisting of unemployed stenographers, clerks, saleswomen, seamstresses, factory workers and a dancer was the first to begin a New Deal program for jobless women that would become confused in its mission and mired in controversy, but would help more than 8,000 women in 90 sites across the US from 1933 to 1937.

So why in the midst of the Great Depression were precious resources spent to send unemployed women on vacation? The answer lies somewhere between the agenda of Eleanor Roosevelt and the Civilian Conservation Corps (CCC).

The CCC was one of the most popular and successful New Deal programs. Two and a half million young men from all over the Depression-ravaged US worked in state forests doing conservation work. They lived in camps and earned one dollar a day. President Franklin Roosevelt especially cherished this project because it championed both his passion for rural life and the philosophy of William James, who deemed this sort of program as the “moral equivalency of war”. Although administered by the Army, the camps were not to be militaristic because the Administration did not want any embarrassing semblance to “Hitler Youth”. The “tree armies” kept an emerging young male population occupied and out of the job market. But, “what about the women?” asked Eleanor Roosevelt.

Plight of Jobless Women

Indeed, shocking stories about women sleeping in subway tunnels and “tramping” proliferated in the early ‘30s. Two million women across the country sought jobs. Why weren’t women in the soup lines? Activist Helena Weed of the National Women’s Party answered, “Men thronged the bread lines while women hid their plight.”

Minnesotan writer/feminist, Meridel Le Sueur, reported that women “will go for weeks verging on starvation, crawling in some hole, going through the streets ashamed, sitting in libraries, parks going for days without speaking to a living soul like some exiled beast.”

Hilda W. Smith, New Deal Education Specialist, said, “People were hungry all over the country. I know, I went to see some of our students in New York, and they showed what they had for supper. They opened the oven, and they were cooking a little puppy they had picked up on the street.”

The First Lady was especially aware of the plight of unemployed women in New York City. She initiated the “room service” program at the headquarters of the Women’s Trade Union League (WTUL) where jobless women went to get clothes, food and job information. Days after the inauguration she visited this program and several other charity centers in New York designed to help unemployed women. She called on the Salva-
SOCIAL PROGRAMS

program. Those in the Administration supportive of the program included: Harry Hopkins, FERA Director; Frances Perkins, Secretary of Labor and especially Hilda W. Smith, who would officially join the New Deal Administration as Specialist in Adult Education.

Smith started her new position in September 1933 with instructions from Hopkins to “do something” for jobless women. Smith was eminently qualified for this job as she had taught at Bryn Mawr College and established the famous Bryn Mawr Summer School for Working Women in 1921. Desirous of expanding the experience to include more educational opportunities, and workers’ education, Smith worked to develop a more defined purpose to the camps apart from health and relaxation. It would take several months of tireless promotional work to activate the program.

In November 1933, Mrs. Roosevelt and Ellen Woodward, FERA Women’s Director, organized an all-day conference with 100 women from government and women’s organizations with the mission of planning a national camp program to help unemployed women. Although the conference participants were unsure of funding, they put together a plan that would utilize empty camps, hotels, schools and any other donated buildings and provide vocational training, health education and recreation. Smith also wanted to teach “workers’ education”, a term that had a strong communist association. She related years later, “I hardly dared mention it because it was so unpopular.”

However, the program failed to get off the ground. Smith addressed the FERA field representatives in February 1934 and met opposition. Participants complained there would be “serious discipline problems if women were brought together to live.” Smith then published a pamphlet, “The Woman with the Worn out Shoes”, depicting the plight of the jobless woman and recommending camps as a way to solve this problem. Half of the FERA field representatives polled said they had no interest or need for such a program in their states. It wasn’t until April 1934 after another conference that the plan was finally approved.

Smith and Roosevelt held a press conference announcing their program which was “intended to serve as social and educational laboratories (from which) women will go forth to cope more intelligently and with renewed strength and courage for their special problems.” A few weeks later, 28 camps in 26 states began operation. The camps were to be run by the participating states and federally funded, however Smith would not have authority over their management or curriculum offerings.

There were 90 camps scattered across the country by 1936. Each reflected the different challenges and cultures indigenous to their locations and depended heavily upon available local resources and talent. There were stories of communities cleaning old facilities and donating bedding, clothes, food and other necessities for the women. North Dakota Indian women left their reservation for the first time to attend a camp program. Barnard College in New York City hosted unemployed union women. Oberlin College welcomed clerical workers into its Summer School for Office Workers. The YWCA in Philadelphia provided space for 40 women to live and study. Black sharecropper women studied at an Arkansas agricultural college. Unemployed professional women in New Jersey attended a special program. Rented houses provided unemployment workers instruction in housekeeping skills in Michigan and Ozark women attended literacy classes.

Controversy

However controversies raged. In a meeting in the morning of 2 July 1936, the American Legion of Rockland County accused Camp Tera of using Federal funds to promote communism.

Camp Tera Director, Bernice Miller, denied the charge. “The campers were permitted the completest freedom to say and discuss what they pleased,” she said, “and sing whatever songs they wanted to.” Some, Miller admitted were “of communist and socialist persuasion.” However most supported the current government.

Specifically the complaints were that the “Internationale” and other radical satires were sung, communist speeches were made and controversial material read. Critics complained that “a gate had been put up to keep visitors out and the communist practices secret.”

Embarrassing events plagued the program. There was a riot in a Montana mountain camp that took several hours to subdue. Women from Camp Tera “escaped” and went to a men’s CCC camp nearby. Harry Gersh, teacher at Camp Tera said, “It was a most
tion Army’s Unemployed Girls’ Hostel, where women could live, and the New York League of Girl’s Clubs canteen service, which was similar to the WTUL’s. However, resources for these private charities were strained.

Opening a Model Camp

Mrs. Roosevelt wasted no time after her husband’s inauguration that March of 1933 activating her agenda. She enthusiastically supported the CCC plan, and she and her feminist friends hoped to establish something similar for women. But what exactly did they have in mind?

Mrs. Roosevelt had just finished reading the popular book Prohibiting Poverty by Prestonia Mann Martin, granddaughter of Horace Mann, who advocated a utopian concept where the nation’s youth, men and women, would work for eight years and produce the necessary products and services for the rest of the population. This philosophy fit perfectly into her desire for utopian planning and experimentation. “It may be possible to try out some of these ideas under the emergency relief,” said the First Lady.

In an effort to be included in the initial CCC funding that March 1933, Hilda W. Smith quickly organized a meeting of the Women’s Trade Union League. The women proposed a series of schools and camps to be set up for jobless women similar to the ones operated by the YWCA. The proposal requested that the camps be funded by federal relief money and located on public property.

Most officials scorned the idea and derisively called them the “She-She-She” camps. The idea of having a camp opportunity for unemployed women would probably have died except for the relentless pursuit of the First Lady.

She knew that the New York Life Insurance Company owned an abandoned employee camp in Bear Mountain State Park near her home in Hyde Park, New York.

She asked the President for funds to start a model camp there for unemployed women. FDR gave the proposal to Harry Hopkins, Director of the Federal Emergency Relief Administration (FERA), who in turn instructed New York State to fund the project with relief money. Thus Camp Tera (Temporary Emergency Relief Administration), later called Camp Jane Addams, began on 10 June 1933 with those 17 young women from New York City. But what exactly would the campers do? Would they work? Take classes? Get paid?

Red Tape and Confusion

As Camp Tera Director, Marian Tinker, showed the women and the press around the 200-acre facility that first day, she told them that rest was to be the priority with other activities and classes added later. The plan was to have 20 girls arrive two times a week until the capacity of 200 was met. However confusion and massive red tape prevailed.

Eleanor Roosevelt first visited Camp Tera a few days after it opened, driving from Hyde Park across the Bear Mountain Bridge, and she was very disappointed to find only 30 campers. “I like this place very much, but I think the requirements too strict,” she said. Mrs. Roosevelt thought it unbelievable that it would be difficult to find 200 unemployed women in New York City who could use the help. “If they do not get the quota, the camp idea will have to be abandoned,” she warned.

Suddenly on the hot seat, Walter W. Petit, field representative of the State Relief Administration explained the slow process and the method of choosing the women to go to the camp. “It is a very thorough investigation,” he said. As of June 20, 700 women had applied. Petit said that the reason the camp filled so slowly was because of the “rigoroussness of the qualifications for eligibility.” The age was raised to 40; however the stringent qualification process remained the same.

There were a lot of questions as to the nature of the camp. Some women thought they would have to work at reforestation and wear uniforms as the men did in the CCC. “Some of the girls in the city were afraid to come because they thought they would have to work too hard and get nothing to eat but maybe some beans,” explained a stenographer. Others feared losing a chance at a job. A few took one look at the camp and climbed right back on the bus to go home.

Despite the initial problems, Camp Tera gained nationwide media attention. Mail poured into the White House from all over the country with offers of properties for more camps, pleas from individuals to attend such a program and promises from government officials to organize camps if Camp Tera was successful.

Expanding the Program

Encouraged by the outpouring of support from people across the country and the reported positive experience of Camp Tera participants, proponents of the She-She-She camps renewed their efforts that fall of 1933 to expand the pro-
unnatural environment for these women... No one had thought that sexual isolation would be a problem.

Another ongoing negative condition regarding the camps was the fact that American citizens in the ‘30s objected to the use of public resources to support individuals, especially women. Besides, most felt, the role of a woman was in the home and it was wrong to entice her out into the public and the work force.

**Camp Experience**

Pauli Murray, who would later become a lawyer, writer, black civil rights activist and Episcopal priest, came to Camp Tera on the advice of her doctor for three months at the end of 1933 and beginning of 1934. Living on the edge of poverty had taken its toll on Murray and she had pleurisy.

Murray’s camp experience was cut short by her clash with the camp’s director, Miss Mills. Murray described Director Mills as “a raw-boned, gray-haired, authoritarian person who had driven an ambulance in World War I and attempted to run the camp on semi military lines.” Murray had a copy of *Das Capital* in her trunk and when Director Mills found it, she had to leave. However, this spirited black woman would later become a close friend of Eleanor Roosevelt.

After the campers finished their two- or three-month visit they were asked to comment on their experience. Most spoke effusively of how the camps had helped them overcome not only health problems, but feelings of hopelessness and loneliness. Others spoke of a new skill they learned. However some campers came with expectations that were not met. “I attended with the idea that the school, being a government school, would mean a lot in securing a job,” said one camp participant. “The school was a good idea but if you can’t get a job after you return home, the government school can’t mean very much.” In fact between 1934 and 1935 only one fifth of the campers got jobs and then mostly in relief projects.

After returning to New York City from Camp Tera, a group of women joined the radical Workers’ Alliance. Sarah Rosenberg, spokeswoman for the organization and critic of the benefit of the She-

**The Camps Close**

On 16 August 1937 the *New York Times* reported that the women’s camps would close on 1 October 1937. The National Youth Administration, then in charge of the program, criticized the objectives and necessity of the camps and decided it was too expensive. As the crisis of hunger and shelter eased, the camp program for women could not be justified and it ended.

Mrs. Roosevelt was never happy with either the women’s or men’s camps. She objected to the military aspect of the CCC and thought women should have a parallel experience. She and her feminist friends shared lofty goals for the camp program and it confused the states. Her vision was a two-year program for young men and women devoted to domestic projects such as conservation, health care, education and settlement houses. At the end of 1933 she said, “There is nothing more exciting than building a new social order.”

Despite the controversies related to communist influence, the extravagance of funding camp vacations, the confused mission and various embarrassing skirmishes, the She-She-She camps of the Great Depression did contribute to the well being of thousands of young women. The friendships and direction as well as healthful living, for however brief a time, provided a welcome lift for these women. She-She camps said, “More than one girl says there is nothing left except suicide or tramping on the roads.”

**Top:** “The Swimming Pool” at a Camp for Unemployed Women in New Jersey (July 1934).

**Middle:** Camp for Unemployed Women in Minnesota (July 1934).

**Bottom:** Camp for Unemployed Women in New Hampshire: “Robin Hood” (June 1934). (Images courtesy of the Franklin D. Roosevelt Library).
Jumbo the Elephant

Doug Elliott follows the trail of the world’s most famous pachyderm

The 10 horses strained against their massive burden as the wooden crate rumbled its ponderous way toward the docks. A boisterous crowd followed under the watchful eyes of the constables. Under the great weight, the wheels smoked and shot sparks, requiring frequent stops as water was poured over the axles. Through a gap in the front of the crate, a gray trunk waved gently. Jumbo was leaving London.

In 1865, Abraham Bartlett, Superintendent of the London Zoological Gardens at Regent’s Park — the original “zoo” — arranged an exchange with Paris’ Jardin des Plantes. Paris got a rhinoceros and London got a small bull African elephant, perhaps four years old. Bartlett named his new acquisition Jumbo, possibly from the Zulu jumba (a large package) or the Swahili jambo (hello) or jumbe (chief).

Bartlett selected Matthew Scott, a man with no previous experience handling elephants, as the elephant’s keeper. Pachyderm and keeper became very close and Scott soon developed a proprietary and protective attitude towards his charge.

Improved public transport brought growing crowds to Regent’s Park and it became fashionable on fine days in the late 1800s to walk in the Zoo. The largest elephant then in captivity, Jumbo became a favorite with visitors who grew accustomed to seeing him lumbering through the park, a handful of grinning passengers on his back. This was a decided novelty; previous riding elephants had all been of the smaller, more tractable Indian variety. It was widely believed that African elephants could not be trained, but to Bartlett, the gentle Jumbo proved otherwise.

“There is no elephant like him in Europe,” wrote The Spectator, “and, we imagine, very few indeed like him anywhere.”

So it remained for almost 15 years until, in 1880, Jumbo began showing signs of restlessness. He flew into periodic rages and smashed the doors and walls of his enclosure, punching holes in the metal plates of its walls and breaking off both his tusks. When Scott, the only one who could approach him during these episodes, took him walking in the park, he became placid again. Bartlett became increasingly concerned. He could not confine Jumbo permanently and he feared an outburst that would threaten park visitors. Preparing for the unthinkable, he quietly petitioned the Zoo’s Council to purchase an elephant gun.

The answer to Bartlett’s nightmares arrived in the form of the great American showman, P.T. Barnum. Constantly seeking new novelties for his famous circus, Barnum learned in 1881 that Jumbo was a powerful magnet for the public, but a serious problem for his owners. In January 1882, The Times announced that Jumbo would be sold for £2,000 to Barnum, who would be responsible for shipping him to America. Barnum also offered Scott a lucrative position as Jumbo’s keeper.

There was no immediate public reaction to the sale. Indeed, if Barnum’s men had successfully delivered Jumbo for his scheduled sailing to America on February 19, we may have heard little more of him. It was not to be. Jumbo, it appeared, did not want to leave. He refused to enter the heavy wheeled shipping crate that Barnum’s men brought to the Zoo. Scott then attempted to lead him through the streets to the docks, hoping he would enter the crate there. Emerging from the Zoo gates in front of a large crowd, the great beast abruptly knelt down and refused to go farther.

That week a letter appeared in The Times expressing “disgust” at the sale and at “the pathetic and
almost human distress of the poor animal at the attempted separation of him from his home and his family." A torrent of similar correspondence to the press and to the Zoo itself followed. Some Fellows of the Zoological Society even sued the Society itself to prevent it from disposing of the animal, but the motion failed in court. Scores of letters, many from children, arrived at Barnum’s door, pleading him to cancel the deal in the interest of Jumbo’s welfare. Barnum declined to comment, but published several of the letters, thrifting on the publicity. When Jumbo had knelt on the street by the Zoo gates, Barnum had gleefully wired his men, “Let him lie there a week if he wants to. It is the best advertisement in the world.”

The ends were removed from the crate and it was set into a trench at the entrance to Jumbo’s enclosure, forming a tunnel between the enclosure and the Park. He happily walked through this tunnel every day for more than a week. On the morning of March 22, Scott halted Jumbo inside the tunnel and carpenters closed the ends, leaving gaps in front for Jumbo to see and to extend his trunk. Crowds joined the journey the following day as the horse-drawn crate rumbled its way, wheels smoking, to St. Katharine Dock. Three days later, Jumbo, secure in the hold of the Assyrian Monarch, left England for his new life in America. Jumbomania faded in England, but in America, the excitement was only beginning.

On April 10, the ship was met by Barnum and the press in New York’s North River. Jumbo had weathered the journey “fine as silk”, the captain reported. The crate was pulled by 16 horses and a two of Barnum’s circus elephants to Madison Square Garden, home of the circus’s New York show. Joining Barnum, Bailey & Hutchinson’s “Greatest Show on Earth”, Jumbo received prominent billing as the “Towering Monarch of His Mighty Race”. He led the grand parade of almost 30 elephants and after the show, he gave rides to children. His debut boosted attendance at the circus and spawned a flood of Jumbo souvenirs.

Barnum fanned the publicity by leaving Jumbo’s actual height and weight a mystery. When the animal had left London, he was nearly 11 feet tall and weighed six tons. Barnum claimed that he had continued to grow in America but refused to let anyone weigh or measure him.

At the end of the run in each city, the circus was packed up and loaded onto railway trains, nearly 100 cars, including Jumbo’s own custom-made Palace Car, for the trip to the next city. Scott remained close at all times, living in quarters in Jumbo’s car. On the rare occasions that Scott was absent, Jumbo fussed and pined for his keeper.

On 15 September 1885, the circus was playing St. Thomas in western Ontario. At the end of the performance, the elephants were led through the railway yards to their respective cars. Their path followed along an unused track between the circus train and a steep slope down to the adjoining field. Suddenly, a freight train appeared, bearing down on them on the very track on which they were walking. Trapped between the embankment and the circus train, Scott hurried Jumbo along the track away from the onrushing train. The freight engineer slammed his engine into reverse but it was too late. The locomotive knocked Jumbo over and derailed. Scott rushed to the prone form of his old companion. Jumbo’s trunk grasped his hand. A few minutes later, Jumbo died. Scott was inconsolable.

Barnum had planned for the inevitable. Two men arrived shortly to retrieve the skin and skeleton for preservation. Barnum toured the skeleton and taxidermyed skin with the circus for two years. In 1889, he gave the stuffed skin to Tufts College in Medford, Massachusetts, where it became a school mascot until it was lost in a fire in 1975. He donated the skeleton to the American Museum of Natural History in New York. Cornell University bought Jumbo’s heart.

The great elephant’s name is now part of our lexicon. Jumbo, the adjective meaning large, is applied to a wide variety of objects from shrimps to airliners. As a noun, it has come to mean elephant and carries a mythic association with regal grace and gentleness. Jumbo’s story has been retold in books, a Broadway musical and a film. The town of St. Thomas, 100 years after the tragic event that raised it briefly to the world’s attention, felt the need to commemorate Jumbo’s memory by dedicating a full-sized statue.
Lyman Cutlar had a problem with a neighbor’s pig rooting in his vegetable garden. Cutlar complained to the neighbor, but one morning, the pig was there again. Cutlar grabbed his shotgun, killed the pig — and nearly started a war between the United States and Britain.

The year was 1859, and Cutlar, a US citizen, was on San Juan Island, one of a group of islands sitting between what is now the mainland US and Canada’s Vancouver Island. The pig — actually a “Berkshire boar” — was the property of the Hudson’s Bay Company, whose agent on the island, Charles Griffin, had established Belle Vue Farm there in 1853. Unfortunately for Cutlar, his act would ignite tempers in an already long-simmering conflict between the US and the British. It would also lead to what would eventually be called the “Pig War”.

The Disputed “Oregon Country”
In the early 1800s, the Pacific coast of North America was in dispute, with both the British and the US among those claiming the “Oregon Country”. This vast, resource-rich area included all of present-day Washington, Oregon and Idaho and parts of Montana and Wyoming, as well as much of the current Canadian province of British Columbia. Despite the presence of indigenous Native Americans, the US and the British claimed the region based upon their “discovery” of it.

Fur trading was a major commercial venture in the area and, in 1812, the Hudson’s Bay Company had established a foothold by taking over a significant fur trading post in what is now Northwest Oregon. Two years later, in the Treaty of Ghent, some boundaries were set between the two countries, but the “Oregon Country” was not addressed.

Negotiations continued, with no result. The British did not want to lose the lucrative fur trade route of the Columbia River, in the southern part of what is now Washington State. The US, however, wanted to secure the important port of Seattle, well north of the Columbia, because the ports of what later became California were country of the Oregon” was “clear and unquestionable”.

Soon the belief in a “manifest destiny” to the entire continent had begun to grip the minds of many in the US and some began to call for war on the border issue. In 1846, the US Congress passed resolutions urging peaceful resolution, and negotiations were hastily begun. By June of that year, the “Treaty of Oregon” was ratified.

The Boar War: Much Ado About a Pig
Kathryn Russell Selk looks at the pig that sparked an international incident

Through the Middle of “Said Channel” and into Further Conflict
In the treaty, the British living near the Columbia River were given navigation rights, and the border was set in North America west of the Rockies, in general, at the 49th parallel. There was one major problem, however. The treaty set the boundary in the Pacific Northwest region “along the forty-ninth parallel of north latitude to the middle of the channel which separa...
rates the continent from Vancouver’s Island, and thence southerly through the middle of the said channel, and of Juan de Fuca’s Straights, to the Pacific Ocean.”

But there was not one such channel — there were several. One of them (now known as Rosario Strait) divides the mainland of what is now Washington State from nearly all the islands in the chain. Another channel runs to the east of San Juan Island, dividing the islands roughly down the middle. The largest channel, Haro Strait, runs between San Juan Island and Vancouver Island.

Whether through lack of knowledge of the region’s geography or out of a desire to settle more pressing disputes, the drafters of the Treaty of Oregon left open a very large question. The British chose to interpret the “channel” dividing the two countries as the one now known as Rosario Strait, thus giving them virtually all the islands in the chain. The Americans, not surprisingly, chose Haro Strait, which gave the US the bulk of the islands, including San Juan.

With the specter of continued US settlement, the Governor of the Crown Colony of British Columbia and the Company’s chief factor at Fort Victoria, James Douglas, decided to take action. He had the Company set up a salmon curing station on San Juan Island in 1851 and, in 1853, ordered Griffin to establish Belle Vue Farm.

Soon after, an American customs collector started coming to the farm to demand that the Company pay customs duties on the livestock there. The collector, Isaac Ebey, declared the animals illegally “smuggled” into American territory. Ebey also appointed an inspector to remain on the island, and tensions increased when the inspector was nearly arrested by the British for the crime of calling himself a custom-house officer on British soil.

Others then got into the act, including a sheriff of the newly established Whatcom County, which included San Juan Island at the time. When his efforts to collect “county” taxes were rebuffed, the sheriff paddled over to the island with a group of bidders. He rounded up a bunch of the Company’s livestock, sold them in auction on the beach after midnight, and managed to herd about half of them into tiny boats while brandishing guns at the frustrated Griffin, who had arrived too late. The US Secretary of State, alarmed at the hi-jinks, warned the territorial governor in the area that such confrontations with the British were to be halted immediately, pending resolution of the boundary dispute.

A boundary commission was unable, however, to come to any conclusion. In the meantime, settlers, seen as squatters by Griffin and Douglas, were continuing to land on the island. One of them was Cutlar.

A Pig of Very Great Price

After shooting the pig, Cutlar went to Griffin and offered to replace it. Things deteriorated quickly, however, when Griffin started demanding the then-huge sum of $100. According to Cutlar, Griffin also threatened to arrest him and take him to Victoria for trial if he refused to pay.

Cutlar and the other American settlers then threw a defiant Fourth of July party on the island, running a US flag up a pole. It was still flying a few days later, when it was seen by US General William S. Harney while visiting outposts in the territory aboard the USS Massachusetts. Curious, Harney landed and quickly became enraged at the stories the settlers told.

Harney, well-known for his anti-British sentiments, had the settlers write up a list of their complaints. He then ordered Captain George Pickett and his 9th infantry to the island, in order to protect American citizens on what he deemed was US soil. A letter Harney wrote at the time reported the claim that Douglas’ son-in-law had arrived at the island in a sloop-of-war and threatened to take Cutlar forcibly to Victoria to stand trial.

Escalation Towards War

On 30 July 1859, four days after Pickett landed and about 45 days after the pig was shot, Griffin sent a demand. He told Pickett the land the Americans were on “is the property and in the occupation of the Hud-son’s Bay Company”. Pickett responded that he did not “acknowledge the right of the Hudson’s Bay Company to dictate my course of action” on what he deemed American soil. By then, Douglas had ordered a 30-gun British frigate to the island, under the command of Captain Geoffrey Hornby. Fearing imminent attack, Pickett begged Colonel Silas Casey at Fort Bellingham to send help. In the meantime, Hornby had also called for help, as it had become clear he would need more than one ship to carry out his orders of preventing Pickett from building fortifications or landing more US troops.
By August 3, two more armed British ships had arrived. At meetings with the British, Pickett refused to leave, threatening to fight any British troops that landed. Douglas had already ordered Hornby to make the occupation “at least... a joint one.”
For some reason, Hornby kept his troops offshore. There they stayed while both the Massachusetts and Casey arrived. By about August 12, Casey estimated, the British forces had increased to 1,940 men, 167 guns and five warships.
On August 13, Douglas wrote Harney, declaring the continued American presence on the island a “marked discourtesy to a friendly government”, “calculated to provoke a collision between the military forces of two friendly nations”. But Harney would not back down. Instead, the US forces began to build a fortification, called a “redoubt”, and gathered supplies, including guns, preparing for the worst.

Cooler Heads Prevail
In the beginning of September, Washington DC finally became aware of what was going on. An alarmed President James Buchanan hastily dispatched Lieutenant General Winfield Scott to sort things out. Scott proposed joint occupation while the boundary dispute was resolved. The British eventually agreed. By November, the dispute was mostly over. Within a few months, the British and Americans would set up separate camps on opposite sides of the island.

It would be 12 years before the boundary dispute would be resolved. After an agreed arbitration in front of a commission appointed by Kaiser Wilhelm I of Germany, the US interpretation of the treaty won. The “Pig War” had ended with only one casualty — the pig.
Wax has been crafted as long as bees have been kept, but it was only after 1867, with the arrival of the first commercially produced paraffin, that the wide world of wax products opened up to the average person.

Because natural wax — whether from bees, whales or plants — is malleable, easy to color and lifelike, for millennia it was a favorite medium among the well-to-do. Ancient Egyptians, for example, created encaustic paintings, paintings made by fusing hot, pigmented wax onto wood with hot irons, or in some cases cartonnage panels, which were inserted into the mummies of the deceased.

Wax became even more desirable in the 18th century as it became more readily available. Still, it was an expensive and fragile medium, so only professionals and wealthy amateurs worked with wax — and it was only the wealthy who could afford wax creations.

Many of these creations were wax portraits, often, but not always, miniatures. They might be of royalty or relatives or, in the US, of patriots like George and Martha Washington (see title background). Some portraits were exceptionally realistic, even wearing seed pearl jewelry, and their cream color contrasted with the black velvet background of their shadow box frames.

Even in America, rich young women were sent to special schools to learn wax portrait making. However, these girls posed no threat to male professionals.

For instance, the same men who made wax church figures were also privately commissioned to make wax dolls.

Other uses for wax were quite practical. Cadavers for medical schools were in such short supply that wax models of human limbs and organs were much sought after. One highly regarded anatomical artisan, Dr. Philippe Curtius, expanded his art to complete, life-sized figures. His niece, Marie, who was also his apprentice, immigrated to London in 1802, and later opened Madame Tussaud’s wax museum in 1835.

Once paraffin, a by-product of the new petroleum industry, was found to be stronger, more abundant and, therefore, more affordable than natural wax, the professional monopoly was broken. In only five years, paraffin found its way into the “parlor” arts enjoyed by Victorian ladies.

Professionals with a survival instinct turned into teachers, suppliers and authors. Quite a few of the new professionals were women, the best known being Emma Peachey. Appointed the first “Artiste in Wax Flowers to Her Majesty” by Queen Victoria, Peachey made wax hair ornaments for court balls, which survived the heat better than natural blossoms. For the Queen’s wedding crown, Peachey crafted a headpiece composed of wax orange blossoms.

Real orange blossoms soon became so popular — and expensive — for weddings that an entire wax orange blossom industry emerged in western France.

At the 1851 Great Exhibition in London, an entire section was devoted to wax flowers. Peachey had a display space separate from the many other wax artists, probably because of her royal connections. Peachey’s work was outshined by a Mrs. Strickland’s wax model of the Victoria Regia water lily, which showed every stage in the development of this also royally linked bloom.

The public immediately took wax flowers to its heart. Wax camellias were all the rage in 1852, thanks to Alexandre Dumas’ hit play, The Lady of the Camellias. All 12 issues from 1856 of the American magazine, Godey’s Lady’s Book, contained directions for homemade wax fruits and flowers.

Part of this infatuation was due to the Victorian woman’s passion for botany. In some schools, wax flower making was taught to girls as a science subject. Realism was the goal, down to a browning leaf or the bruise on a pear. In
the home, wax food was displayed alongside the real thing to fool the eye or, in dining rooms, to “provoke appetite”.

One all-wax creation boasted fruit, slices of layer cake, vegetables, oyster shells and hard-boiled eggs cut open. Another was composed of watermelon slices, apples and peaches, cakes and strawberry pastry.

Men, too, took the scientific side of wax seriously. Scientific American named Edmunds & Gill the year’s best wax fruit makers in its November 1850 issue. Englishmen John and Horatio Mintorn were renowned in the 1870s for their wax models displayed in the British Museum and, later, for those in New York’s American Museum of Natural History. They were also known for making wax mourning wreaths and published wax crafting handbooks.

Wax crafting produced a flood of how-to manuals, many of which went into second and third editions. For example, the book Wax Flowers: How to Make Them, was originally published in 1864, but was re-issued as The Art of Making Flowers in 1885. This second edition was produced without the earlier volume’s extensive fruit-making section, which had covered mold making, casting and finishing. The book also instructed how to bleach wax at home, remove wax from a dress and — like many manuals of the era — make wax flower varieties unfamiliar to us, such as heartsease and coreposis.

Other books gave directions for such arrangements as the natural Easter cross or an Easter cross of flowers. Crosses were considered the perfect form for wax crafting. An 1875 book detailed the making of both marble and autumn leaf crosses. The 1888 Popular Art Instructor told how to replicate icicles on an imitation granite cross by spooning melted wax over its arms, then sprinkling on “diamond powder”. It also advised arranging wax violets, snowdrops and trailing arbutus around the cross’ base.

Because of the painstaking realism required, a woman might spend a decade assembling one basket of flowers. The process became faster (and easier) when sheets of wax could be bought instead of made at home. Printed patterns and metal cutters eliminated the need to pull apart real flowers for tracing. Molds for fruit, birds and animals could also be purchased, instead of being cast from plaster by the artist.

For those with limited talent, waxed flowers were an alternative. While wax dipping dimmed colored flowers, it added luminosity to white ones. Many white waxed wedding bouquets or funeral wreaths found their way under glass domes or into shadow box frames around a photograph of the bridal couple or a deceased loved one.

Wax also had uses beyond the botanical. British straw-plaiters made wax figures to wear the braided straw costumes they designed. Wax angels and cherubs were sold as Christmas tree decorations. Even after china and composition dolls took over the market, some dolls wore a wax layer over their pottery base. Tiny wax babies decorated greeting cards celebrating births and baptisms.

Possibly the most imposing wax figures were the display mannequins, which “peopled” the windows and selling floors of the new department stores. The best “dummies” had real hair, glass eyes and amazingly lifelike skin.

Wax crayons, once made only in black for crate marking, became available in a rainbow of colors in 1903 by the Crayola Company. Wax sewing thread was stronger and easier to use — and the wax that seamstresses pulled their thread through often came in novelty shapes.

In the 1920s, people used sealing wax not only for correspondence, but for modeling flowers and birds to adorn baskets, boxes, vases, lamps, lampshades and mirrors. This sealing wax decoration was a variation on the popular gesso-based craft called barbola work, in which objects would be crafted out of a thick paste and then painted.

Dennison Manufacturing Company, in particular, offered sealing wax in many colors. In a Dennison newsletter from the 1930s, “paint” made by dissolving white sealing wax in alcohol, was applied to a picket fence-like window box. Another article told how the Queen of Italy invited a Dennison instructor from Rome to teach her sealing wax crafts. The article was illustrated with a photograph of the instructor’s creation which had so pleased the Queen: A plate centered with a beautiful sealing wax bouquet.

Candy shops in the 1940s sold wax lips and little wax bottles filled with sugary liquid. And, in the 1950s, factory-made wax fruit filled many a bowl on dining and coffee tables, alongside sequined and beaded varieties. While most wax flowers were superceded by plastic ones, a 1950s crafts book (Joseph Leeming’s Fun with Artificial Flowers) gave instructions for waxing crepe paper flowers with a combination of beeswax and paraffin. The same volume told how to model wax flowers using candle wax colored with crayons.

Today, wax art isn’t as prevalent, but many crafters are still brushing melted wax over collages made from the pages of artist’s books to create interesting and unusual effects.
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The Discovery of Tutankhamun’s Tomb

Phill Jones documents one of archeology’s most famous discoveries

On 4 November 1922, a young, restless water boy made history at an excavation in Egypt’s Valley of the Kings. Imitating his elders, he dug into the hot sand. Soon, he hit a hard surface — a stone step. The boy ran across the site and told Howard Carter about his finding. By the end of the day, workers uncovered a stone stairway that led to an ancient tomb. Carter sent a telegram to England.

“At last have made wonderful discovery in Valley,” he told his benefactor, Lord Carnarvon, “a magnificent tomb with seals intact; re-covered same for your arrival; congratulations.”

Before long, Carter would learn that the tomb held one of the greatest archeological discoveries of the time: the final resting place of King Tutankhamun.

The Boy King

Amenhotep III, who might have been Tutankhamun’s father or grandfather, became pharaoh at the age of 12 and ruled for 38 years. During this golden age of the 18th Dynasty, the Egyptian empire accumulated immense wealth, and excelled in literary and artistic achievements.

As a ruler, the pharaoh’s son, Amenhotep IV, failed to measure up to his father. Amenhotep IV abandoned the god Amun and the pantheon of lesser Egyptian gods. Turning from the traditional gods, Amenhotep IV advocated devotion of the Aten, the solar disk. The new pharaoh changed his name to Akhenaten, “servant of the Aten”, and he built a new capital city christened Akhetaten, “horizon of the sun disk”, which is modern Tel el-Amarna. In doing so, the eccentric king removed power from the administrative headquarters in the city of Memphis and religious center in the city of Thebes.

Smenkhkare succeeded Akhenaten. He ruled for a brief time and quietly left.

Around 1343 BC, a boy of about 10 years, Tutankhaten, ascended to the throne and assumed control of the Egyptian superpower. Although his name meant “living image of the Aten”, the boy king restored the old ways by reinstating the traditional pantheon of gods and reopening their temples. Tutankhaten also reestablished Memphis and Thebes as seats of power. To honor the god Amun, Tutankhaten and Ankhesenpaaten, his chief queen, changed their names to Tutankhamun and Ankhsenamun.

Tutankhamun’s relatively peaceful nine-year reign ended with his untimely death. Many conspiracy theories evolved to explain how the boy king died.
Despite a lack of evidence of murder, two of the pharaoh's advisors have figured in assassination theories: Aye, who might have been Ankhsenamun's grandfather, and General Horemheb, the commander-in-chief of the army.

The burial ritual of Tutankhamun reflected the Egyptian belief that his ba and ka, the two parts of the king's personality, separated from the body. The ka, an individual's life force, needs food, drink, clothing and other earthly requirements to function in the afterlife. The ba, the soul or personality, could leave the tomb and travel around the earth during daylight. A correctly mummified body and properly executed funerary rites would enable the ba and ka to be reunited, allowing the deceased to become an akh, an eternal spirit.

An elaborate embalming process preserved the body so that the ba could return to the mummy at night and ensure its continued life. Embalmers removed the lungs, liver, stomach and intestines, dried the organs in salts, anointed them with oils, wrapped the organs and placed them in solid gold miniature coffins. Using a long metal hook, the embalmers removed the brain through the nostrils.

They dried the corpse's flesh with natron, a mixture of salt and baking soda. After applying resins to soften the skin, embalmers wrapped Tutankhamun’s limbs in linen bandages, while priests chanted spells and placed amulets and jewelry between the layers of cloth. They covered the body’s fingers and toes with golden cylinders and placed a golden funerary mask on his face.

Aye, Tutankhamun’s successor, prepared a small set of rooms in an underground tomb near the floor of the Valley of the Kings, located on the west bank of the Nile and across from Thebes. Soon after the burial, thieves broke into the tomb, but were caught in the act. Officials resealed the vault. In time, workers constructed a tomb for another pharaoh nearby. Their huts obscured Tutankhamun’s burial place. Over the years, floods erased any surface evidence of the young king’s tomb.

Howard Carter Draws Near His Destiny

Carter was born on 9 May 1874. As a boy, he suffered from ill health and lived with his aunts in Swaffham, Norfolk. Carter’s parents, who believed their son too delicate to attend a private school, arranged for home education. Carter’s father was an artist who worked for the Illustrated London News and also specialized in animal paintings. He taught Howard drawing, and found that his son had an aptitude for it.

Howard Carter’s interest in Egyptian antiquities and his artistic talent brought him to Egypt in 1891. London’s Egypt Exploration Fund had hired Carter to help P.E. Newberry record drawings and inscriptions of tombs at Beni Hasan and el-Bersha. During the following decade, Carter gained archeological experience at the excavation of el-Amarna with Flinders Petrie and as a member of an expedition at the temple of Hatshepsut at Deir el-Bahri.

In 1899, Carter accepted the position of Inspector General of Monuments for Upper Egypt, and controlled archeological work in the Nile Valley. A fight between drunken French tourists and Egyptian guards ended Carter’s Antiques Service career. Carter refused to apologize for his guards. He insisted that his men had only defended themselves; it was the tourists who should apologize. Following a demotion to a minor post, Carter resigned from the Antiques Service in 1905.

At the same time, George Edward Stanhope Molyneux Herbert, Lord Carnarvon, toured Egypt to recover from a terrible automobile accident. In 1908, Carnarvon decided to finance an archeological exploration. The government required that such work must be supervised by an experienced archeologist. Carter, who eked out a living as a commercial artist and tour guide, happened to be available.

At first, Carter and Carnarvon focused on Thebes. In 1912, they moved their operation to the Delta with modest result.

The Egyptian government — under British occupation — granted qualified archeologists permission to excavate on ancient sites. The Antiquities Department allowed them to take out of the country half the antiquities that they found. The government excluded the Valley of the Kings from this rule, but did grant one license to explore the area.

Since 1902, Theodore M. Davis, a wealthy American, had secured the license to dig in the Valley of the Kings. In 1906, Davis’
archaeologists uncovered a blue glaze cup bearing the cartouche of Tutankhamun. During the next year, they found a rock-cut chamber that held numerous objects with Tutankhamun’s name. Davis assumed that he had discovered the tomb of Tutankhamun.

Carnarvon had acquired one of the most valuable private collections of Egyptian antiquities by 1914. Nevertheless, when Davis, who believed that he had uncovered all major finds in the Valley, relinquished his license, Carter convinced Carnarvon to obtain the concession.

For years, Carter had gathered scraps of information on Tutankhamun and believed that the pharaoh’s tomb remained hidden in the Valley of the Kings. The outbreak of WWI forced the two to postpone their work.

In 1917, Carter and Carnarvon began their exploration of the Valley of the Kings. Carter decided that the only way to search for Tutankhamun’s tomb would be to ignore earlier excavations. He focused on a two-and-one-half acre triangular plot of land defined by the tombs of Ramesses II, Merenptah and Ramesses VI. For the first time in the history of Egyptian archeology, he would clear the surface down to the bedrock. To ensure that the work would be systematic, Carter devised a grid system based on the step-by-step artillery barrages of the war. Carter’s plan required the transport of hundreds of thousands of cubic meters of sand, rock chips and boulders, labor performed by men and young boys with picks, hoes and small baskets.

When the workers cleared the rubble from the corridor, they found a second plastered doorway, which also appeared to have been broken and resealed in antiquity. On November 26, Carter used his hands to dig a small breach in the second doorway. He inserted an iron rod into the opening and found empty space on the other side. He then lit a candle to check for noxious gases. In his book, *The Tomb of Tut.Ankh.Amen* (1923), Carter recorded his impressions of the moment: “At first I could see nothing, the hot air escaping from the chamber causing the candle flame to flicker, but presently, as my eyes grew accustomed to the light, details of the room within emerged slowly from the mist, strange animals, statues and gold — everywhere the glint of gold. For the moment — an eternity it looked inside. A passage filled from floor to ceiling with stones and rubble lay on the other side of the door, a sign that care had been taken to protect the tomb. He ordered his workers to refill the stairway for protection and sent a telegram to Carnarvon in England.

Three weeks later, Lord Carnarvon arrived with his daughter, Lady Evelyn Herbert. After clearing all 16 steps of the stairway, Carter found a seal impression of Tutankhamun on the lower part of the doorway.

Grave Discovery
On November 1, Carter continued his search in the Valley of the Kings. After a water boy discovered a stone step on November 4, Carter and his workers spent the afternoon uncovering 12 steps of a rock-cut stairway that descended at a 45-degree angle into a small hillock below the entrance to the tomb of Ramesses VI. At the level of the 12th step, Carter found the upper portion of a door constructed of large stones that had been plastered. The doorway’s surface bore the Royal Necropolis seal: Anubis over nine foes. Carter could not find a royal name, but he did notice that a corner had been resealed, indicating that robbers had broken into the tomb during ancient times and that something valuable remained.

Carter made a small peephole, inserted an electric light and looked inside. A passage filled from floor to ceiling with stones and rubble lay on the other side of the door, a sign that care had been taken to protect the tomb. He ordered his workers to refill the stairway for protection and sent a telegram to Carnarvon in England.

Three weeks later, Lord Carnarvon arrived with his daughter, Lady Evelyn Herbert. After clearing all 16 steps of the stairway, Carter found a seal impression of Tutankhamun on the lower part of the doorway.

For five years, the work yielded little. In the summer of 1922, Carnarvon told Carter that he would no longer fund the expedition. Carter persuaded his benefactor to continue for one more season.
must have seemed to the others standing by — I was struck dumb with amazement, and when Lord Carnarvon, unable to stand the suspense any longer, inquired anxiously, ‘Can you see anything?’ it was all I could do to get out the words, ‘Yes, wonderful things.’

Carter and Carnarvon entered the room that they would name the antechamber. Here, they found three large gilt couches with sides carved in the form of animals, and two life-sized figures of a king in black that faced each other like sentinels dressed in gold kilts and gold sandals, and armed with mace and staff. The room also held painted and inlaid caskets, alabaster vases, black shrines, carved chairs, beds, a golden inlaid throne and a heap of overturned chariots that shimmered with gold and inlay. On the floor, Carter found a large bouquet of flowers with preserved petals and leaves.

Despite the hundreds of treasures it held, the antechamber measured only 12 by 26 feet with a ceiling seven-and-one-half feet high. It did not contain a mummy. Through a plunderer’s hole in one wall, they found a ransacked room that they named the annex. The cluttered chamber held oils, wine, food, carved thrones, an ivory-covered, carved chest, detailed alabaster figures of animals and a boat, game tables, vases and other everyday items that the pharaoh could take with him to the afterlife.

Between the antechamber’s two sentinel statues, they found another sealed doorway. Did it lead to the burial chamber? Carter and his colleagues secured the site, mounted their donkeys and returned home, silent and subdued.

Diagram showing the layout of Tutankhamun’s tomb.

After notifying the Antiquities Service, Carter assembled an international team of experts to examine the tomb and preserve its contents in drawings and photographs. They offered the first official press viewing of Tutankhamun’s tomb on December 22. News of the richest collection of ancient Egyptian treasure sparked a frenzy in the media. Although it had been hastily ransacked, the tomb remained almost intact. For the first time, archaeologists could study all of a pharaoh’s funerary equipment that offered insights into an ancient culture.

Triumph Begins to Unravel

Tens of thousands of visitors rushed to the Valley of the Kings and interfered with the study of the site. Carter became frustrated and began to turn everyone away from the tomb, including those who had official government permission.

By the end of February, the contents of the antechamber had been carefully removed for examination. Carter made a hole in the doorway between the sentinels and inserted an electric torch. “An astonishing sight its light revealed,” Carter wrote, “for there, within a yard of the doorway, stretching as far as one could see and blocking the entrance to the chamber, stood what to all appearance was a solid wall of gold.”

They removed stones from the doorway, revealing the side of a nine-foot-tall shrine. Within this shrine, they found a second shrine, built to cover a sarcophagus. They had entered the burial chamber.

The room contained objects that the king would need during his journey through the under-
AFTER HOWARD CARTER and his team finished their examination, they replaced Tutankhamun’s remains in his coffin. The mummy rested undisturbed for about 40 years.

In 1968, a group from the University of Liverpool used x-rays to learn more about the young pharaoh. They found bone fragments inside Tutankhamun’s skull. Did political enemies bludgeon the young pharaoh to death? X-rays revealed that the mummy lacked the sternum and some frontal ribs. Had the pharaoh’s chest been crushed in a chariot accident? The spine displayed signs of scoliosis.

Almost another 40 years passed before researchers applied a new technology to the riddle of the boy king’s health and death. In January 2005, scientists removed Tutankhamun’s mummy from the sarcophagus, and transported it to a nearby trailer equipped with a mobile computerized tomography scanner. The machine scanned the body in 0.62-millimeter slices, producing 1,700 three-dimensional images. An Egyptian team of radiologists, pathologists and anatomists, as well as three international experts, examined the scans.

The images revealed a well-nourished 19-year-old boy who stood about five-feet six-inches tall and had a slight build. He appeared to have enjoyed good health, or at least, avoided any disease that would have left a trace on his remains. The experts decided that a misalignment during embalming had produced the spine’s curvature, not scoliosis. Tutankhamun had a slightly cleft palate, an overbite and an elongated skull.

The scan revealed the bone fragments uncovered by earlier x-rays. However, the experts concluded that embalmers or Carter’s group had inflicted the damage. The pharaoh had not been murdered by a blow to the head.

A break in Tutankhamun’s left thighbone suggested a possible cause of death. The scan revealed a thin coating of embalming resin around a bone break that showed no sign of healing. This suggested that the pharaoh broke his leg just before he died. A fatal infection could have set in.

The damaged chest still presents a mystery. Did embalmers remove the breastbone and part of the front rib cage? That question remains unanswered.

CSI: EGYPT

British Protectorate, began to exert greater control over the excavation site. Carter bristled against the diminishing power over his find.

In February 1924, Carter conducted special guests into the tomb for a long-awaited event: examination of Tutankhamun’s mummy. It was not a simple matter. First, massive granite slabs of the sarcophagus lid had to be pried up, so that stones could be rammed into the opening. After securing straps around the lid, the granite slabs, weighing nearly two tons, were raised from the stone coffin. When Carter shone a light into the sarcophagus, he saw an object obscured by linen shrouds. He removed the linen wrapping to reveal a golden effigy of the boy king made of gilded wood and decorated with thin gold plates, faience (tin-glazed earthenware) and semiprecious stones.

After they left the tomb, Carter asked Pierre Lacau, director general of the Antiquities Service, if the excavators’ wives could visit the tomb before the press viewing on the following morning. The next day, Carter learned that the Minister of Public Works had denied the request. Carter responded to the calculated insult impulsively. With the massive stones hanging over the young pharaoh’s remains, Carter and the excavators went on strike.

The Egyptian authorities accused Carter of negligence. Carter demanded apologies from the government for the disrespect it showed him and his staff. Instead of an act of contrition, the government required Carter and Lady Carnarvon to sign a waiver stating that they would not make a claim on objects found in the tomb.

After a year of negotiation, the Egyptian government agreed to pay Lady Carnarvon £36,000, the approximate amount of Carnarvon’s expenses over the years. Carter received about £5,500 of this sum and was allowed to resume work on the excavation.

In January 1925, Howard Carter returned to the Valley. He raised the lid of the gilded coffin that he had seen a year before and found a second coffin, this one covered with fine linen shrouds and adorned with garlands of flowers. Carter rolled back the

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shrouds to reveal yet another cof-fin, one fashioned of thick gold foil inlaid with engraved glass that simulated red jasper, lapis and turquoise.

After they pried open the lid of the third coffin, Carter saw Tutankhamun’s mummy. A sticky, hard-en ed, black resin covered the body and bound the king’s head to a life-sized gold mask inlaid with blue glass simulating lapis lazuli.

For four days, the team unraveled bandages and recorded each of the artifacts hidden within the wrappings. With the assistance of Dr. Douglas Derry, professor of anatomy at the Egyptian University, Carter sliced through 13 layers of stiff linen. By the time that they had finished, they had collected 143 pieces of jewelry, ornaments, amulets and imple-
ments.

To examine the resin-coated mummy, they cut off the head at the neck and used hot knives to pry the skull from the mask. Then they separated the pelvis from the trunk and detached the arms and legs. Two medical specialists examined the mummy and con-
cluded that the king had died between the ages of 18 and 22.

After the examination, they reassembled the remains on a layer of sand in a wooden box with padding to conceal the dam-age and replaced the mummy in the tomb.

Howard Carter and a worker examine King Tut’s sarcophagus.

The Tutankhamun excavation marked Carter’s last. He died in England in 1939. In his account of the first exploration of the antechamber, Carter wrote that, “The day fol-
lowing (November 26) was the day of days, the most wonderful that I have ever lived through, and certainly one whose like I can never hope to see again.”

This might seem like an odd statement. According to his official account, Carter had the opportu-
nity to explore the burial chamber and treasury months later. What Carter failed to mention in his ver-
sion of events is that he, Carnar-
von and Evelyn had secretly revisited the tomb. After breaking through the antechamber, they risked their license by exploring the burial chamber and treasury. Afterwards, they had disguised traces of their adventure. A report of their unau-
thorized exploration emerged years after Carter’s death. Yet Carter might have hinted about the excursion in his book. “I think we slept but lit-
tle, all of us, that night,” he wrote.

Further Reading:
• Smith, G. Elliot, Tutankhamen and the Discovery of His Tomb (London: George Routledge & Sons, Ltd., 1923).

In January 1923, Carnarvon had to minimize the press’ intrusion on excavation workers, and he had to acquire additional fund-
ing for the expensive project. Carnarvon solved both prob-
lems by signing an exclusive contract with the London Times. Reporters from other publica-
tions resented the Times’ monopoly on breaking news.

Lacking facts, excluded journalists eagerly reported that, at the time of Carnarvon’s untimely death, Cairo’s lights blacked out, while in England, Carnarvon’s dog, Susie, howled and dropped dead. The mummy’s curse slew Carnar-
von, newspapers informed their readers.

Journalists backed up the curse story with reports of omi-
nous hieroglyphs. One reporter invented a curse written in hieroglyphics on the door of the second shrine: “They who enter this sacred tomb shall swift be visited by wings of death.”

In front of the Anubis shrine of Tutankhamun’s tomb, Carter had found a wick lamp with a small mud base bearing hiero-
glyphics that read: “It is I who hinder the sand from choking the secret chamber. I am for the protection of the deceased.” One correspondent embellished Carter’s find by adding the words, “and I will kill all those who cross this threshold into the sacred precincts of the Royal King who lives forever.”

Six of the 24 people present at the official tomb opening had died by 1934. No matter how natural the circumstances, each death rekindled stories about the dreaded mummy’s curse. However, recent statistical analyses show that those pre-
sent at the opening of the tomb did not experience a decreased survival time.
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Four minus four may equal zero today, but in the days of ancient Greece and Rome the answer was not so simple. This is because zero was not a concept included in Greek or Roman counting systems. Not even by the Middle Ages, in fact, had zero found a home in the counting systems of Europe. Why? Because zero has an uncommon history. And it would take centuries before zero would finally ensconce itself comfortably in the framework of European society.

Zero in Ancient Societies

Zero was discovered independently at least three times. When it was discovered, its solitary purpose was as a place holder in place value counting systems. A written record of its use in this manner by the ancient Babylonians in present-day Iraq around 300bc is the first known.

Originally, the Babylonians had no symbol for zero because an empty space between numbers was considered sufficient demarcation of a place holder. But because blank spaces could be easily overlooked or misinterpreted, the method proved unreliable. The Babylonians responded by coming up with the first known symbol for zero, two different symbols in fact, although their use was infrequent.

The wedge shape of the Babylonian zero little resembled the zero of today, but it successfully accomplished its purpose as a placeholder and as a marker between two numbers to indicate an empty position. But as time passed, and Babylonian culture declined, zero did too. And in doing so, began a pattern of hibernation and emergence in human society that would prove to be zero’s trademark for a long time to come.

The ancient Greeks had a more sophisticated number system than the Babylonians and their advancements in knowledge were unprecedented. Despite this, the Greeks had no symbol for zero in their number system. In fact, zero had a tendency to cause problems for the Greeks of literally universal proportions.

Numbers were important to the Greeks. To say that the Greeks worshiped numbers is not, in fact, hyperbole. Their collective brilliance in both geometry and philosophy can be traced back to their passion for numbers and their relationships. Music, astronomy and society could all be sensibly explained to the Greeks using numbers and number relationships. Numbers were the cornerstone of the Greek universe. One Greek thinker, Pythagoras, even took to organizing a cult around the worship of numbers. There was only one problem — the Greeks used only rational numbers (any number that can be written in the form \( \frac{a}{b} \), such as \( \frac{1}{2} \), where \( a \) is any integer and \( b \) is any integer except zero). They would have to learn by experience that numbers, like the humans that created them, were not always rational. Men like Hippasus of Metapontum died, according to legend, before the Greeks admitted to cracks in their perfect rational number universe. Hippasus was executed by members of the cult of Pythagoras for revealing the secret truth about irrational numbers (numbers that cannot be expressed as fractions, such as pi).

Although the next appearance of zero anywhere post Babylonian would take time, that time was certain to arrive. It would, in fact, be centuries later, halfway across the world, where zero would reprise its role as a place holder — in the intricate calendar system of the Mayan culture of Central America, where it would survive for hundreds of years. But, unfortunately, as Mayan culture crumbled, so again did zero.

Zero in India

While the west had difficulty with zero, the east took to it with an almost instinctual sense. The fact that Indian Hinduism is a religion that acknowledges, even worships, a “void” concept, likely played no small role in
zero’s acceptance there. Consequently, it’s no surprise that zero’s first known appearance as the symbol and number we know today has been traced back to India in the ninth century AD. It was there that a tablet was inscribed with directions for supplying garlands to a local temple. The instructions included the numbers “50” and “270” and were written almost exactly as they are today.

From the moment it was born though, zero would begin causing problems. And one of the biggest of all for Indian mathematicians would be how to even approach the concept of division by zero. Regarding this, Bhaskara II, a leading Indian mathematician, writes, “This fraction is termed an infinite quantity… there is no alteration, though many may be inserted or extracted; as no change takes place in the infinite and immutable god when worlds are created or destroyed, though numerous orders of beings are absorbed or put forth.” It wasn’t the first time the divine would be referenced in discussing zero. Nor would it be the last.

Zero Catches On

As India went into decline, so did zero once again. But this time it wouldn’t be for long. From India, it went to China and to Arab and Islamic cultures. It would be Islamic culture, in fact, that would act as the crucial link between India and Europe when it came to the transmission of zero. Men, like the Muslim mathematician and astronomer Al-Khwarizmi (from whose name comes the English words algorithm and algebra), would continue to spread the idea of zero with brilliant mathematical treatises that elaborated upon the Indian Hindu number system and its properties. It was the Latin translation of Al-Khwarizmi’s Algoritmi de numero Indorum (Concerning the Hindu Art of Reckoning) in c.1200 AD that would, more than any other single work of mathematics, help to raise Europe from the miasma of the Middle Ages.

Oddly enough, many of the reasons why zero failed to catch on in the west had to do with philosophy and religion, rather than mathematics. Zero represented nothing, the void, the great chaos from which all creation sprang. It was a dark and frightening concept in Church theology, just as it had been in Greek philosophy. And its implications were so terrifying to the intelligentsia of the time that its discussion was taboo. Since much of Church philosophy and cosmology was derived from ancient Greek culture, the taboo mentality of many pre-Renaissance thinkers was the same as that of their Greek predecessors. The philosopher-mathematicians (as they were frequently called since philosophy and math were often intertwined in those days, as were philosophy and science) of the day could not, or did not, want to grasp the implications of the existence of nothingness or a void.

The Church reacted with a number of measures meant to contain the rising tide against their authority. The Spanish Inquisition was instigated, the Jesuit order was instituted, Galileo was ordered to...
stop his scientific investigation and put under house arrest, and men with controversial views, like Giordano Bruno, were burned at the stake.

As the Church itself would eventually discover however, its objections to Renaissance ideas were in vain. And it would have to learn to reconcile its authority with the revolution in thought that was occurring all around it.

Zero and the Renaissance

The impact of zero on Europe was immense. And the contributions to the Renaissance directly or indirectly attributable to zero are many.

For example, European merchants began to recognize the value of nothing when it came to understanding business and keeping track of goods.

Another such advancement was known as the vanishing point. Mathematical in conception, it came about as artists realized that a single one dimensional point had within it the power of the void and infinity from which everything could emanate. Its first use in European art transformed the medium, as it brought the technique of perspective into play for the first time. Before the Renaissance, paintings and drawings were flat and two dimensional. Now they could be deceiving in their realism.

The revolution in science in the Renaissance can be traced to zero as well. For zero’s symbolism of infinity and the void would quite literally open up scientific thought to whole new worlds. Copernicus with his heliocentric theory, Pascal with his work on vacuums and the independent discovery of calculus by Leibniz and Newton, all owe a debt to zero, infinity and the void.

As mathematician G.B. Halsted said of zero, “No single mathematical creation has been more potent for the general on-go of intelligence and power.”

Zero’s Adventures Today

Zero still likes to stir things up occasionally. The great millennium cyber panic of the year 2000 is sufficient evidence of that. It also still has a penchant for confounding even the greatest of mathematical and scientific minds today as it did a millennium ago. One thing appears certain though, after centuries of disappearance and discovery, it looks like this time, zero is here to stay.

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Kel Morin-Parsons delves into the mysterious life and death of playwright Christopher Marlowe

No matter how famous the names or how much information we seem to have, people from centuries past seem invariably remote to us. This makes sense, of course; we didn’t know them, and they lived in a time that was very different from our own. This sense of distance is especially pronounced when one considers those who were artists of some sort — poets, playwrights or painters. After all, such creatures seem exotic at the best of times, even when they are our contemporaries.

But we know that, at base, people are people, regardless of when they lived, and it is often the small, overlooked details that draw them out of the mists of time and make them seem familiar. When we are lucky enough to have any information about a historical figure, we may be surprised by how appealing and intriguing we find that person, and how the centuries seem to melt away.

Christopher Marlowe is such a figure. Most people who recognize his name think simply of a poet or playwright — someone who died young and has been overshadowed by his contemporary, William Shakespeare. Marlowe, however, is far more than just a footnote or afterthought. Upon examination, the pieces we know of his life make him seem like a character from a spy novel. We know with certainty that he was a noted and admired writer in his own time, the late 16th century. On top of this, however, there are indications that he worked as an intelligence agent for the government of Elizabeth I of England, may have been an atheist at a time when it was illegal and was probably homosexual. Finally, he met a violent end at the age of 29 in an incident that has long been shrouded in controversy.

Education and Intrigue

Christopher Marlowe was born in the southeastern English town of Canterbury. His baptism, at the church of St. George the Martyr, took place on 26 February 1564. He was the son of a shoemaker, John Marlowe, and his wife, Katherine Arthur. Although there is some disagreement about the financial state of Marlowe’s family during his childhood, there is no question that shoemakers were not terribly high on the Elizabethan social scale; they were considered artisans, and thus tended to be more “respectable” than prosperous.

Despite his humble background, young Marlowe’s keen intelligence was evident early, and he was given a good education. After attending the King’s School in Canterbury, he was sent to the venerable Corpus Christi College of Cambridge University in 1580. Marlowe attended Cambridge as a scholarship student thanks to the legacy left by Archbishop of Canterbury Matthew Parker. It seems that Marlowe was originally destined to enter the church, as he received a six-year scholarship, generally reserved for students intending to take holy orders. Studying history, philosophy and theology, Marlowe was granted his Bachelor of Arts in 1584; three years later, he obtained his Master of Arts degree. While this course of events may seem unremarkable, it is during this period that Marlowe’s life starts to become intriguing.

When Marlowe arrived at university, Elizabeth I was queen. Two of the most powerful men in England were her trusted advisor Sir William Cecil, and her secretary of state, Sir Francis Walsingham. Walsingham, known to history as Elizabeth’s spymaster, was a man of exceptional shrewdness and cunning, and had worked diligently to establish one of the best and largest intelligence networks in Europe. His close colleague, Cecil, was a Privy Councillor and Lord High Treasurer — and also Chancellor of Cambridge University.

These facts in themselves would mean little in terms of Marlowe’s story, were it not for the circumstances surrounding the granting of his master’s degree. Cambridge was initially reluctant to approve the degree for a couple of reasons. First, Marlowe had been absent for extended periods of time, and did not seem inclined to take the holy orders for which his scholarship (and the graduate degree) had fitted him. Second, it was rumored that he was spending his time away in the French city of Rheims.

In Marlowe’s day, Rheims was notorious as the home of a seminary where English Catholics and converts were trained to return to England to serve and encourage the faithful there. Elizabeth was Protestant and Catholicism was outlawed in England under her reign. The Catholic powers on the continent were eager to see her removed from power and England returned to its Catholic roots. The rumor that Marlowe was visiting Rheims was enough to make Cambridge authorities assume that he was contemplating conversion. That, combined with Marlowe’s cavalier attitude toward attendance, jeopardized his second degree. What finally compelled Cambridge to grant Marlowe the MA was a letter from Queen Elizabeth’s Privy Council — signed by, among others, Privy Councillor and Chancellor of Cambridge University, Sir William Cecil.
Intervention from the Privy Council was not, of course, usual in disputes between the university and its students. The fact that this letter exists at all is extraordinary, and makes clear that whatever was taking Marlowe away from his studies was considered important by the most powerful people in the land. The letter does not specify just what Marlowe was doing while absent from university, but it alludes to the rumor that he had visited Rheims and intended to remain there. The letter denies this, and instead says that Marlowe was engaged in important business on the Queen’s behalf, and that Her Majesty did not want his degree jeopardized as a result of this service.

It is impossible to say for certain what sort of government business Marlowe was engaged in during that time, but it seems evident that it involved intelligence work. The Privy Council letter makes it clear that he was not simply an ordinary civil servant, and Rheims (if Marlowe did, indeed, travel there) was a target of spy activity for the English, as it was a fertile ground for plots against the Queen. The so-called Babington plot, which was aimed at assassinating Elizabeth and her chief advisors and placing the Catholic Mary Queen of Scots on the throne, was exposed in 1586, and it is thought that Marlowe may have been involved in its exposure. Marlowe’s employment as a spy makes sense when one considers his circumstances at Cambridge. Chancellor Cecil was close to Walsingham the spymaster, who would have been interested in sharp and adventurous young men who might make able spies. Cecil would have been aware of the most promising students, and could have advised Walsingham about them. Supporting this theory is the fact that, while at Cambridge, Marlowe became friends with Thomas Walsingham, a cousin of Sir Francis. Thomas Walsingham, whose ensuing career kept him close to the court for the rest of his life, became an important artistic patron of Marlowe’s, and would have an ominous connection with the circumstances of his death.

By 1587, “Kit” Marlowe, the shoemaker’s son, had attracted the attention of some very powerful people, and had proven himself worthy of their confidence. This confidence, however, may have been fatally shaken by Marlowe’s conduct as the years went by.

**Art and Incarceration**

Marlowe proceeded to London after leaving university. Any thoughts of taking holy orders were clearly behind him. Instead, the writing career he had begun at Cambridge became his focus. Marlowe wrote some poetry at Cambridge, but the plays for which he is best remembered were written after that period. Such works as *Tamburlaine the Great* parts I and II, *Dr. Faustus, The Jew of Malta* and *Edward II* all belong to the fertile seven-year period between 1587 and 1593. Several of his major theatrical works are still produced today, and in their own day revealed the power of blank verse in the hands of an expert. As well, among his enduring poems are such pieces as *The Passionate Shepherd to His Love* (“Come live with me and be my love”), still a favorite in poetry anthologies.

During this time, Marlowe’s literary reputation grew, provoking both imitation and jealousy among other members of London’s lively theatre community. Regardless, unlike his contemporary Shakespeare, Marlowe showed no signs of becoming a settled, successful businessman of the theatre. In Elizabethan England, the world of the performing arts was generally considered scandalous and degraded, even by those aristocrats and nobles who enjoyed its fruits. Shakespeare was able to navigate this prejudice and become a wealthy landowner in his hometown of Stratford-upon-Avn. The focus and discretion that made this possible, however, were evidently of no interest to Marlowe.

In 1589, Marlowe and a friend were charged with murder as the result of a street brawl; he spent two weeks in jail, but was let off with a warning. Three years later, Marlowe was arrested in the Netherlands on a charge of counterfeiting, and was sent back to England. Although Cecil was supposed to have dealt with him on this serious charge, there is no evidence to indicate that Marlowe was punished in any way. It is thought that this incident may well have been part of Marlowe’s ongoing intelligence work. The same year, Marlowe was charged with assaulting two police constables in London, though he again seems to have escaped with only a warning to keep the peace.

While it seems clear that Marlowe’s connections protected him from the worst consequences of his actions, his brash, impulsive behavior can hardly have been compatible with sensitive espionage work — and it ultimately may have led to his tragic death.

Marlowe’s life did not become calmer or more stable in the wake of his brushes with the law. Instead, in the summer of 1593, he found himself in even deeper trouble. In May of that year, authorities arrested a playwright named Thomas Kyd for possession of documents that denied the divinity of Jesus Christ. At the time, this was considered heresy, a serious crime.

*The house on the corner of St. George’s Street and St. George’s Lane, believed to be where the Marlowes lived during the early years of Christopher’s life. It was destroyed in a German air raid in 1942.*

In 1589, Kyd had written *The Spanish Tragedy*, an incredibly popular play in its day, and he was well-known in London theatre circles. Under torture, Kyd claimed that the incriminating documents, which had surfaced during a raid on his lodgings, in fact, belonged to Marlowe, with whom he had been roommates a couple of years before. As a result, Marlowe was arrested, but was not tortured as the hapless Kyd had been. Instead, he was put on probation, and was warned to remain where Elizabeth’s advisors could find him.

Shortly after this incident, a man named Richard Baines, a known government informant who was connected with Marlowe’s counterfeiting trouble in the Netherlands, brought to the Privy Council a note supposedly outlining Marlowe’s blasphemous feelings on matters crucial to the Christian faith. Some of the contents of this note, along with a number of references in Marlowe’s plays and poems, have also contributed to the opinion that he was homosexual. It was the atheistic material, however, that put the playwright in danger. The young writer’s recklessness seemed to be catching up with him.

**The Final Act**

Perhaps it would have been better if Marlowe had been jailed after his arrest. On 30 May 1593, still awaiting a summons or judgment from Elizabeth’s authorities, he dined in Deptford, now a southeast London suburb. The company he kept there reinforced the notion that Marlowe was deeply embedded in an underworld of espionage, filled with characters that could most charitably be described as shady.

The three men who dined with him were Robert Poley, Nicholas Skeres and Ingram Frizer, all known con men engaged in intelligence work through their association with Marlowe’s patron Thomas Walsingham (Frizer was actually described as a “servant” of Walsingham’s). All three men were involved in the exposure of the Babington plot — the very matter thought to have drawn Marlowe away from Cambridge during his graduate studies. Marlowe had probably known these operatives for some time.

What truly transpired that evening in Deptford will probably never be known, but after the evening meal, a dispute apparently arose between Marlowe and Frizer. The general description of what ensued was that Marlowe was stabbed as a result of a brawl over the paying of a bar bill, and died. In 1925, Renaissance scholar Leslie Hotson discovered the report of the coroner’s inquest into Marlowe’s death in the Public Record Office.

On 29 June 1613, the thatched roof of the Globe theatre, where many plays of the time were performed, caught fire and destroyed the building. This engraving shows the second theatre built in its place.

On probation, and was warned to remain where Elizabeth’s advisors could find him.

This brought eyewitness accounts to light for the first time in several centuries. The first thing the report did was set the record straight on the place of Marlowe’s murder. Marlowe dined and died at the home of one Dame Eleanor Bull, a widow with ties to the Elizabethan court. Her place was neither a bar nor a tavern, but a private home that is now thought to have been a safe house for agents employed by the government. The four men present that evening had spent most of the day at the house, and had lunched and dined in an upstairs room. After the evening meal, Marlowe apparently reclined on a bed behind the dining table. The other three men remained seated at the table with their backs to him. The coroner’s report claims that Marlowe’s angry exchange with Frizer was indeed over payment of the day’s tab. As the argument grew heated, Marlowe grabbed Frizer’s knife and attacked him with it. In defending himself, Frizer grabbed the knife from Marlowe and stabbed him over the right eye, killing the 29-year-old Marlowe instantly.

This account sounds plausible, and may have been what happened. The men involved in this incident could all be described as potentially violent, and Marlowe’s history makes it clear that he had a hot temper. Considering the large quantities of wine that may have been consumed, it wouldn’t have been surprising if circumstances got out of hand.

After the evening meal, a dispute apparently arose between Marlowe and Frizer. The general description of what ensued was that Marlowe was stabbed as a result of a brawl over the paying of a bar bill, and died. In 1925, Renaissance scholar Leslie Hotson discovered the report of the coroner’s inquest into Marlowe’s death in the Public Record Office.

The fact is, however, that the only accounts offered of Marlowe’s murder were those of the three men present when he died, one of whom was his killer, and all of whom were of questionable reputation. Marlowe’s notoriety was at its peak in the spring of 1593, and he was facing the possibility of serious legal trouble and severe punishment for his behavior and supposed beliefs. If he was a government agent — and it is hard to dismiss the evidence that he was — then his handlers may have decided that he was too great a liability to continue in their service, or even to be left alive. Did Thomas Walsingham, acquaintance or employer of all the men present in the Deptford room, order Marlowe’s death before he was called to account for his beliefs and actions? Theories abound, and the truth is probably now beyond reach.

One thing is indisputable, however: Christopher Marlowe was a larger-than-life figure whose impact on English literature is matched by the excitement and tragedy of his existence. He reminds us that even a few intriguing pieces of a personal history from the distant past, when carefully considered and investigated, can yield a story as gripping as anything we observe today.
Opium Dens and Bohemia

Abridged from the book *A Pickpocket's Tale: The Underworld of Nineteenth-Century New York*, author Timothy J. Gilfoyle takes us on a tour of an opium den

Extracted from *A Pickpocket's Tale* by Timothy J. Gilfoyle. Copyright (c) 2006 by Timothy J. Gilfoyle. With permission of the publisher, W.W. Norton & Company, Inc.

George Appo’s experiences in Gotham’s earliest opium dens marked the emergence of a new kind of criminal — the drug addict. Opium dens represented a unique place of criminal assembly, an underworld collective devoted to the pleasures of the pipe. Like the street and prison, the opium den served as a school for Appo, providing the means to learn alternative and safer forms of illicit enterprise. “Sure thing graft” — confidence games or swindling operations with very high rates of success like bunco, flimflam, fake jewelry, and green goods — supplanted pickpocketing. The opium den proffered a new criminal career for Appo.

Opium was a commonplace drug in the 19th-century United States. While its precise use prior to 1920 remains uncertain, contemporaries and later historians acknowledged a dramatic increase after the Civil War. By 1870 opiate use in the United States was not only widespread but virtually unregulated; it was more popular and widespread than tobacco would be a century later. Physicians and pharmacists, for example, prescribed laudanum, morphine, and other addictive opiates as painkillers. Since opium did little damage to the kidneys and liver, some doctors assumed the drug was less detrimental than alcohol. Others falsely believed that opium cured alcoholism. For these and other reasons, the United States never prohibited the use of opium for nonmedical purposes until the 20th century.

Like his contemporaries Appo attributed the rise of opium smoking to Chinese immigrants. The missionary E.W. Syle reported finding extensive opium smoking among the few Chinese immigrants in New York in 1854. “There is no question that the Chinese imported the opium habit into America,” complained one newspaper in 1883. While racial stereotyping — if not outright racism — characterized most analyses, probably a minimum of 20 percent of Chinese immigrants used opium.

The growth of opium smoking, however, was more than a product of Chinese immigration. Indeed, the emergence of opium dens — commonly called “opium joints” or simply “joints” — was stimulated by their popularity within the non-Asian population. During the 1840s and 1850s, the increasing Chinese population...
generated little, if any, discussion of the drug. Opium smoking, for example, was never mentioned during Quimbo Appo’s trials for murder in 1859 and 1860. Only as opium grew popular in underworld, entertainment, and leisure venues after 1865 did contemporaries take notice.

Opium smoking differed from other forms of drug use. In contrast to orally ingesting the narcotic, smoking required a lengthy preparation process and an expensive “layout.” Smokers needed a special 18-inch pipe, bowl, sponge, chisel, and tray. The “cooking” was usually performed by a resident “chef,” who shredded and then boiled raw opium, allowing him to separate the “essence” or “purified” opium. The residue was then kneaded into a gooey, thick black paste, which smokers called “dope.” Unlike “opium eaters,” who usually became addicted because of a medical condition, opium smokers used the drug for pleasure.

Opium smoking attracted increasing attention after the Civil War. In 1871 one writer noted that at the end of the 19th century, “opium shops were found in cities “where the opium dens were situated in a four-story tenement just off the Bowery, only a few steps from several prominent concert saloons. Inside, smokers reclined on low platforms extending the length of the small, dimly lit room, their heads supported by small wooden stools. The Chinese proprietor, Poppy, weighed and served opium in little seashells. Fumes from the pipes filled the room with such a thick, bluish cloud that one visitor claimed it was impossible to see his hands held at his waist. When the smoke cleared, he observed a dozen small peanut-oil lamps glowing like the fire flies in a fog,” and a room packed with smokers, all of whom were Euro-Americans. Poppy busily moved from patron to patron supplying opium, many crying out, “Poppy, gimme a quarter’s worth.”

The proliferation of Chinese-operated opium dens evidenced a more significant phenomenon: the emergence of an American bohemian subculture. An ill-defined intellectual proletariat of penniless and carefree writers, journalists, poets, actors, and artists, bohemians challenged a host of Victorian social norms. For a variety of people, the bohemian milieu of opium smoking was accessible to almost anyone, allowing not only men and women to intermingle but also individuals of different class, ethnic, and racial backgrounds. The opium dens frequented by Appo in Lower Manhattan embodied the popularization of bohemian life in the United States. After visiting one Pell Street den, one reporter wrote that “in five minutes [we] found ourselves in busy Printing-House Square, mingling again with that civilized half of the world which knows not, nor could ever dream, how the other
and editorial career, during which Pfaff’s and went on to a writing
published to hashish as a teenager. After he
step further: He became addicted
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prophet of organized Bohemian-
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“Sporting men,” “fancy
men,” dandies, and
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urban masculinity and
male sexuality. A hetero-
genous mix of wealthy
and poor, educated and
ignorant, fashionable and
ragged, sporting male
culture valorized a sexual ethic
based upon male aggressiveness
and licentiousness. Some even
attributed the growing popularity
of opium smoking to sporting
men.

American writers like Edgar
Allan Poe and Fitz-Hugh Ludlow
were the first to describe in detail
the world of opium users and
abusers. While their examinations
emphasized orally ingested
opium, Poe introduced some of
the earliest opium-addicted char-
acters in American literature, in
some quarters becoming "the
prophet of organized Bohemian-
ism.” Fitz-Hugh Ludlow went one
step further: He became addicted
to hashish as a teenager. After he
published The Hasheesh Eater in
1857, Ludlow became a regular at
Pfaff’s and went on to a writing
and editorial career, during which
time he remained addicted to the
narcotic. He published The Opium
Habit (1868) before his premature
death in 1870.

The opium use and bohemian-
ism popularized by Poe, Ludlow,
and the Pfaffians was limited to a
small, elite group of intellectuals
and artists. "Opium eating,” in
particular, tended to be a solitary
activity. This changed by the
1870s. As opium use shifted from
eaters to smokers, the drug
became more accessible and com-
munal. In fact smoking was a
social experience. In places like
Poppy’s Mott Street den, smokers
organized themselves into small
groups of two to six persons, all
sharing a pipe and smoking
equipment. One individual
cooked the drug and prepared the
pipe, which was then shared and
smoked in turn by the others.

Opium den patrons told stories,
cracked jokes, sang in low voices,
and drank beer. In contrast to the
raucous and sometimes violent
atmosphere of the saloon, the
opium den was a place of relax-
ation and quiet contemplation.
Numerous smokers maintained
they enjoyed a kinship with fellow
habitues. Opium smoking
"loosens the tongue and develops
social qualities,” observed one
writer, “rather than the fighting
spirit engendered by whiskey.”

Opium smokers saw the drug
as the raw substance of dreams.
Smoking opium put the user in a
deep but refreshing sleep, lasting
anywhere from 15 minutes to sev-
eral hours. Upon waking, the
smoker felt no aftereffects like a
hangover. Opium induced a sub-
duced tranquility, “an indescrib-
able sense of complete
satisfaction,” “dreamy wakeful-
ness,” and "paradise,” according
to various smokers.

A new language emerged in
this paradise. Habitual opium
smokers were labeled “hop
fiends” or just "fiends." Novices
and infrequent users were simply
"pleasure smokers." By the 1890s
the drug was called a variety of
names: "victor medicine," "Span-
ish cigarettes," and “dope.” As
opium dens spread
throughout cities in the
United States, they
became part of an under-
world social network
with a common argot,
shared rules, and peer
reinforcement, anticipat-
ing the pattern of 20th-
century drug subcultures.

The opium den pro-
moted a certain egalitar-
ian ethos. One former
addict and otherwise crit-
ical observer noted that
"the old saying, ‘There is
honor among thieves,’
applies equally well to
opium fiends. They never
steal from each other
while in the joint.” He was most
impressed by witnessing intoxi-
cated men and women enter
opium dens, lie down, and go to
sleep with jewelry exposed and
money in their pockets. Fighting,
he and others noted, rarely
occurred. Similarly a reporter was
impressed with the loyalty and
 camaraderie among opium smok-
ers, in which social position
accounted for little.

Opium dens also promoted an
exotic, “Oriental” ambience of
Asian mystery. Typical was one
Pell Street den with a narrow
room decorated with vases, color
prints, mirrors, and Chinese
inscriptions. Two broad shelves
or divans extended along a wall, the
upper about six feet above the
floor, the other less than two feet
high. Each was covered with bam-
boo mats and pillows, turning
them into “bunks” on which opium smokers reclined. “The mysterious gloom, the flickering opium-lamps, the barbaric colors on the walls, the trance-like appearance of the smokers, and the deathly stillness,” wrote one visitor, “contributed to make the scene a weird and impressive one.”

Although opium smoking induced sleep and lethargy, opium dens were identified with “licentiousness.” The physician and opium researcher Henry H. Kane believed that opium smoking produced “satyriasis” in men and nymphomania in women. Opium dens were consequently perceived as sites of seduction. Repeated observations noted that opium dens were filled with scantily clad women who disrobed on entering in order to make themselves comfortable. At the very least the atmosphere was erotic.

The presence of prostitutes further sexualized the opium den. By 1887 certain businessmen and property owners complained that prostitutes worked out of most of the buildings along Mott Street and north of Chatham Square. Opium dens on adjoining streets displayed a similar mixture of drug use and commercial sex. When the police raided establishments on Pell and Mott Streets for prostitution violations, they found the inmates “hitting the pipe.” By 1890 at least six tenements on Doyers Street were noted for their mixture of prostitution and opium.

The link of opium with prostitution and various illicit activities convinced some that the milieu of the hop was filled with social outcasts. “The people who frequent these places are, with very few exceptions, thieves, sharper and sporting men, and a few bad actors; the women, without exception, are immoral,” wrote one. The writer James L. Ford admitted that “the criminal classes of New York” — gamblers, prostitutes, confidence men, and thieves — took up opium smoking early on.

Numerous other commentators, however, noted the diverse clientele of the joints. Entertainers associated with the theater were among the most frequently cited opium smokers. “Together with a few brilliant Bohemians,” surmised writer Allen Williams, theatrical people “compose the aristocracy of the joints.” Some, like the den under Paddy Martin’s Wine Room at 9 Bowery, were known for their patronage by well-known actors. Others, like Bessinger’s Fourteenth Street opium joint, attracted so many thespian addicts in the 1880s that the proprietor admitted patrons simply to observe famous stage performers getting high. One police reporter concluded that the “lower order” of theatrical people — variety actors and dancers — represented “the greater part of the white devotees of the pipe in New York.”

Yet Euro-American opium smokers also came from affluent backgrounds, in part because opium was expensive. One Chinese writer claimed in 1888 that some addicts needed to smoke three dollars’ worth of opium daily in order “to keep straight,” a habit costing approximately one thousand dollars a year, roughly the entire annual wage of most American workers. Reports describing dens full of “society women,” “richly-dressed ladies,” “respectable people,” and “the best class of customers” multi-

Repeated observations noted that opium dens were filled with scantily clad women who disrobed on entering in order to make themselves comfortable. At the very least, the atmosphere was erotic.

For many opponents of opium use, however, the most controversial element of the den was the random, unregulated mingling of classes, races, and sexes. The societal markers of the “outside” world broke down under an ethic of individual hedonism and narcotic license. In contrast to opium dens in London, the joints Appo frequented, like 4 Mott Street, were filled with “men and boys of respectable conditions, girls and hardened women, thieves and sporting men, actors and actresses, drunken carousers and Chinamen,” according to one reporter. One detective noted that all “castes” were set aside in opium dens. Homeless beggars lay down beside offspring of the wealthy; whites, blacks, and Asians shared the same physical space. A reporter concurred, noting how in certain dens a “Union League Club man will lie with the head of a City Hall Park bunco steerer upon his chest, laughing and joking with him as if they had been ‘comrades, comrades, ever since we were boys.’” Periodic police raids, random arrests, and prosecutorial indictments confirmed many such charges.

These behaviors alarmed critics, but to little avail. New York’s Koch Law of 1882 made buying, selling, giving away, or using opium for the purpose of smoking a misdemeanor, but most arrests resulted in little more than suspended or dismissed cases. More often than not law enforcement officials tolerated opium dens. Numerous reporters and observers claimed that police officers stationed in Chinatown routinely brought “slumming parties” of outsiders, curious about the goings-on in opium dens. One addict remembered policemen entering a Pell Street opium den,
arresting several suspects, and walking out without bothering the smokers. Reportedly the ward man was a close associate of the proprietors.

In the final decades of the 19th century, the opium dens of Chinatown facilitated and represented an ill-defined, inarticulate bohemian world. While this intercultural milieu fostered little intellectual debate, displayed less middle-class self-consciousness, and attracted fewer females compared with Greenwich Village bohemia after 1900, it nevertheless embodied a liminal space fostering an ethic of mutuality, hedonism, and fantasy. The bohemia George Appo confronted in these early opium dens at once conveyed an exotic and erotic “Orientalism” alongside a “rough,” male underworld. In Gotham’s opium dens pickpockets like Appo met their “genteel” Victorian counterparts. Respectable actors, actresses, artists, and “clubmen” fraternized with sneak thieves, confidence men, and prostitutes. Evoking an ambiance of Asian mystery, this hidden subculture was devoted to the pleasures of the pipe and the body. Opium smoking then gave birth to a distinct American bohemia.

So one cold winter’s night, I drifted into a Mott Street opium joint at No.17 (basement at the time) where a place called the “Five Corners.” Above this section all the rich people and the green goods financial backers, had opened a swell opium joint on Crosby Street. I called there and was informed that Fred had been smoking there and that he was going West. I told him I would join him and we would work both ways, that is, I would help him at his work and he would help me at mine. He agreed and the next day we both went to Philadelphia, where we stayed three days. He made no money there, but I was successful and we went to Scranton, Pennsylvania.

On arriving there, I said to him: “Should you ever get arrested, what name would you give in?” He replied: “Fred Crage.” “Is that your right name?” I asked.

“No, my right name is Fred Young.”

I told him I would give the name of George Leonard, so we worked Scranton and many other cities until we reached the city of Chicago, where we made a long stay, about 3 months, and all the money he made from New York to Chicago was $17. I paid railroad fare and all other expenses from the results of my stealing from New York to Chicago.

So one day, just the beginning of winter time, Fred said to me: “We will go to St. Paul, Minnesota. I have a good ‘thing’ up that way and if I am lucky we will be ‘away up in G.’”

“Well, all right, any place suits me.” So we went to St. Paul. In two weeks, he made eight dollars. Finally, one afternoon we took a train for Minneapolis, only a short ride from St. Paul. That night he took me up to a place called the “Five Corners.” Above this section all the rich people live. He went to a house, climbed the porches, and opened a window and got in while I was on the lookout for him. He soon came out and when a safe distance away we met and he showed me a silver watch and a cheap stickpin. I told him that was very poor graft and too risky and that he had better give it up.

He replied: “You just wait, I’ll get there, good and fat.”

“I hope so,” said I, so we went back to St. Paul to our room. On the next evening at 5:45 p.m., I was at the St. Charles Hotel in Minneapolis by appointment with Fred, who told me to be sure to be there. I waited for him until 10 p.m. at the hotel, but he did not show up himself, so I went back to St. Paul to my room and waited there all night. As he did not appear, I went and got the morning paper and therein was an article about the house being robbed of jewelry and money to the amount of $37,000 while the family were at dinner. The fact that Fred had tried the night before to rob the house and failed and he disappointed me at the hotel by not showing up to [meet] me, led me to believe that he robbed the house alone and left me out.

I then made up my mind to hunt him up and bring him to account for his mean act, or as the “crook” says — “Putting me in the hole for my share of the coin.” I knew that he was deeply attached to a young girl about 17 years of age who was an inmate of a parlor house in St. Louis on Elm Street. In fact, he was all the time talking about her to me, so I got a move on myself, made some money picking pockets that day and then bought a ticket to St. Louis and left St. Paul that night.

On reaching St. Louis, I went direct to the fast house where his girl lived. I saw and talked with her and she said to me: “Fred was here and left about an hour ago for New York. See what nice presents he made me,” showing me a pair of diamond earrings, a diamond ring and a sealskin sacque. “Fred is going to send for me and take me to New York in a few days,” said she. I commented upon his generosity and bid her goodbye.

After one day’s graft in St. Louis, I left for Louisville, and from there to Cincinnati, and kept on going from town to town until I arrived in New York. Then began a search for Fred in the opium joints. After visiting three of them and not meeting him, I finally learned that Barney Maguire, the green goods financial backer, had opened a swell opium joint on Crosby Street, opposite Niblo’s Garden Theatre. I called there and was informed that Fred had been smoking there and that he had taken a ship and sailed for Paris, France. This information I found to be true, so I gave up the chase and soon forgot about Fred’s mean act until one day about five months after he sailed for Europe, I heard from a friend of Fred’s, who got a letter from him, stating that he was sentenced to 15 years imprisonment in Paris, France for burglary. Then I forgot him entirely.
ALPHONSE BERTILLON MATURED in an atmosphere of scientific achievement. His father, Louis-Adolphe, a pioneer of demography and anthropology, served as president of the Paris Anthropological Society. His brother Jacques became a prominent statistician. Alphonse, on the other hand, distinguished his early years as a dedicated underachiever.

After getting the boot from his first school, Alphonse irritated his German tutor into quitting. Alphonse went on to boarding school where he tried to use a spirit lamp to cook inside his desk. This experiment, and the resultant fire, secured a dismissal. His blemished formal education did not prepare Alphonse for a career. He drifted from one job to another, joined the army for a while, and gave medical school a try. With his father’s help, a 26-year-old Alphonse secured a clerical job in the department of the Préfecture of Police in 1879. Here, he copied information about arrested felons and entered the data in a record. Bertillon, who found the work excruciatingly boring, might well have moved on to another job. Instead, inspiration struck.

At this time, European law enforcement agencies faced the dilemma of recidivism (habitual offending), a problem nourished by the anonymity of new, large cities. In France, the proportion of récidivistes among arrestees rose from 10 percent in 1828 to 40 percent in 1869. Government officials concocted a way to curb the problem: Treat first-time offenders leniently and repeat offenders severely. Implementation of this policy required a system for identifying habitual criminals. Bertillon became familiar with deficiencies of current identification tactics, a mixture of vague, written descriptions, blurry photographs and police officers’ memories. Drawing upon his father’s and brother’s specialties, Bertillon developed an anthropometric identification system that required a series of measurements.

First, he classified a criminal by one of three general head size types. Using an 11-step process, he then categorized an individual by height, length of trunk and dimensions of various parts of the body, including the forearm, middle and ring fingers, and the left foot. Bertillon also noted distinctive characteristics, such as scars, moles, tattoos and eye color. Finally, he enhanced the traditional arrestee photo by including frontal and profile views. The mug shot format remains a worldwide standard.

Bertillon met resistance to his identification scheme, but several years’ persistence earned him an extended trial. In Bertillon’s system, officials measured an arrestee, recorded descriptions of characteristics and photographed the subject. They preserved information and photos on a large cardboard form. To search for a match independent of the name given by an arrestee, investigators sorted cards until a small number had the correct combination of measurements. Mug shots confirmed identification.

In February 1883, bertillonage revealed a habitual criminal who had been arrested under different names. By the end of the year, Bertillon had identified 49 habitual criminals. During 1884, the first full year of operation, he identified 241 recidivists.

Across the globe, law enforcement agencies adopted Bertillon’s system. In part, fear drove this enthusiastic response, a fear of the anarchist movement. As director of the new Judicial Identification Service, Bertillon showed how bertillonage could fight political radicalism. In 1892, Bertillon revealed that the infamous anarchist “Ravachol” was François Claudius Koenigstein, a mass murderer.

Even as Bertillon enjoyed his triumph, a contender for bertillonage emerged. In his book Finger Prints (1892), Francis Galton sug-
gested a new identification system based upon an examination of finger friction ridges. Over the next decade, fingerprinting gained momentum. Edward R. Henry, Commissioner of London’s Metropolitan Police, proposed a fingerprint classification and analysis system to replace bertillonage. In 1901, Scotland Yard opened a small Fingerprint Branch. A year later, the organization abandoned bertillonage after attempting to combine the systems.

Fingerprinting offered several advantages. A person required little training and equipment to record a set of fingerprints. Henry’s classification system made it easy to perform a search of records. The fingerprint system also allowed police a chance to connect a criminal to a crime by fingerprints left behind. Law enforcement agencies were ready for a simpler identification method. Bertillonage had proved difficult to put into practice. Calipers, sliding compasses and other measuring tools required frequent maintenance and recalibration, and the labor-intensive measuring process called for rigorous training. Even highly trained officers could decide upon different values after measuring the same person twice. And, unlike fingerprints, bertillonage relied upon characteristics that changed as criminals aged.

The anthropomorphic system persisted in parts of Europe, bolstered by Bertillon’s prestige and influence. After Bertillon died in 1914, however, fingerprint identification rapidly overtook bertillonage.
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Halvor Moorshead
Editor & Publisher
Hey Buddy, Wanna Buy a Tower?

Brian J. Noggle tells the story of the men who sold the Eiffel Tower

In America, con artists, such as George C. Parker, made a living selling the Brooklyn Bridge. However, they didn’t usually prey upon native New Yorkers. Sometimes, well-heeled foreigners saw the visible landmark and coveted the toll revenue produced — hundreds of dollars a day at the turn of the 20th century. Although audacious, the cons yielded only hundreds of dollars from naive newcomers — a bargain for a bridge that cost $15.1 million to build.

Across the ocean in Paris, a Bohemian native pulled off a more daring and more lucrative scheme: He sold the Eiffel Tower to a native Parisian.

Victor Lustig took to the seas at an early age. Not as a sailor, but as a con artist working the transatlantic liners filled with gullible passengers. Lustig worked a number of cons on the ships and stateside. Along the way, he befriended “Dapper” Dan Collins, another conman. The duo decided to settle in Paris, not as honest men, but as schemers with bigger dreams.

In 1925, Paris had recovered from WWI and was returning to prominence as an artistic hub. American expatriate writers, such as Ernest Hemingway, Ezra Pound and Sherwood Anderson, congregated in the salon of Gertrude Stein and Alice B. Toklas. Pablo Picasso and Henri Matisse were being recognized as brilliant artists. However, at the center of Paris stood a blight that many Parisians deplored: La Tour Eiffel.

Gustave Eiffel built his namesake to serve as the entrance to the 1889 Exposition Universelle (World’s Fair). Many didn’t care for its appearance. French novelist Guy de Maupassant purportedly ate at the restaurant in the Eiffel Tower daily because it was the only place in Paris from which one did not see it.

The tower served its purpose, and the city granted permission for it to stand for 20 years. After that, the city of Paris planned to tear it down, but the invention of radio gave the structure a new purpose.

In the early 20th century, the tower was not the tourist attraction it is today. Its height and structure lent it to radio transmission, so the city decided to extend the tower’s lifespan. But the maintenance, including some 60 tons of paint applied regularly to prevent rust, burdened the city’s coffers. When a Parisian newspaper ran an article detailing the city’s concerns, Victor Lustig found inspiration.

The Eiffel Tower weighs approximately 7,300 tons and includes more than 18,000 pieces of puddle iron, an alloy with high tensile strength that was cutting edge in the latter half of the 19th century. Eiffel designed the tower for easy disassembly at the end of the 20-year period. This information provided a ready back story for Lustig. Unlike his American counterparts, he would not target people who might have an interest in operating the Eiffel Tower for profit. Instead, he targeted those who would profit from its easy destruction: Scrap metal dealers.

Together, Lustig and Collins acquired counterfeit government stationery and invited several scrap metal dealers to a meeting at the prestigious Hotel de Crillon in Paris. Six men arrived, at which point Lustig identified himself as a deputy minister. He detailed the tribulations of maintaining the Eiffel Tower and said that the government had decided to sell it for scrap. Lustig took the group on a tour of the tower to point out the value in the metal.

He then solicited bids from all, but made them vow to keep the pending sale secret. To avoid a public outcry, he asserted, the government did not want to release news until the details were finalized. Regardless of the bids received, Lustig only wanted one bid in particular: Andre Poisson’s. Lustig’s research indicated that Poisson was something of an outsider in the Parisian world, making him an ideal buyer.
target. Additionally, Lustig expected that Poisson would be on the lookout for a big deal to earn the respect of his business peers — and the Eiffel Tower deal could provide that impetus to greatness.

Something in the initial meeting confirmed Lustig’s hopes and expectations about Poisson. When Poisson provided a bid, Lustig sent him word that his bid had won, and Lustig’s secretary, Collins, scheduled a second meeting.

At the second meeting, Poisson was slightly suspicious. His wife had raised concerns that the deal seemed too good to be true. However, Lustig hinted at his own dishonesty, indicating that he needed a bribe as part of the deal. This subterfuge proved effective, for Poisson could see a reason for the surreptitious meetings and what was in it for the deputy minister. Perhaps Poisson had met with such officials before.

Poisson took the bait and bribed the corrupt “government official”. Lustig accepted the bribe and a cashier’s check — reportedly for 250,000 francs (approximately half a million dollars US today) — for the Eiffel Tower. After quickly cashing the check, Lustig and Collins left the country, expecting the authorities on their heels. But Poisson apparently didn’t report the crime. Perhaps he feared that the swindle would have made him the laughingstock of his peers instead of a leader amongst them. After this, Poisson faded from view, probably left bankrupt and shamed.

A month later, Lustig and his companion returned to Paris and tried the scam again. They selected another mark and rounded up additional scrap dealers, but this time, the mark grew suspicious and alerted the authorities. Lustig and Collins, however, eluded capture. Lustig returned to America to run many more cons, including escaping custody by selling a money-making machine to the incarcerating sheriff.

Although Lustig’s sale of the Eiffel Tower and his other exploits have become legend, there’s one scam he has never been associated with — selling the Brooklyn Bridge.
FOOTBALL IS AN extremely popular team sport enjoyed by millions the world over, yet it has numerous varieties, including two distinct forms native to North America. North American football owes its origins to British Association Football and rugby that developed in the early 19th century. Canadian and American football were spawned in the latter half of the 19th century as an amalgamation of the two sports, to which the path into its modern identifiable form was wrought with many twists and turns.

Both British football and rugby were played in North America in the 19th century, most prominently amongst the eastern colleges and universities. Different rules were adopted at different colleges, as there existed no real uniformity at first. The first club to be formed was the Oneida Football Club of Boston in the 1860s, composed of high school boys from Boston. Many of them went on to attend the Ivy League colleges of the region, where they brought with them their more organized form of football.

It was from this that the first intercollegiate game of football was played on 6 November 1869 in New Brunswick, New Jersey, between Rutgers and Princeton. The rules used that day were very similar to Association Football and it was deemed a success as Columbia, Yale and Stevens all joined the original two colleges in competition in the following years.

During those years, Harvard was perfecting their own game, similar to rugby, as it was characterized by less kicking and allowed running with the ball if a player was being chased. An Intercollegiate Rules Convention was held in New York in 1873 with Harvard’s refusal to attend as they now found a shortage of opponents to challenge. This decision had far reaching consequences, as it caused Harvard to look elsewhere for opponents and, as luck would have it, a team in a similar predicament existed north of the border.

While British football was popular in the United States during this period, Canada tended to be more similar to rugby, partly due to climactic conditions. Rugby could be played under worse field conditions than football and thus, later into the fall, better befitting the Canadian calendar. Members of the English garrison stationed in Montreal during the 1860s played rugby against civilian teams composed principally of McGill students. This led to an upsurge in the game’s popularity amongst the English-speaking segment of Quebec and by the early 1870s, Quebec could boast of having the best rugby teams in North America.

Harvard’s isolation and similar style caused them to challenge McGill to a series of contests in the spring of 1874 at Cambridge, which has frequently been cited as the most important turning point in the history of North American football. The first game was contested under Harvard’s rules and the second under McGill’s. Although both teams normally used more than 11 men, McGill only arrived with 11, which gave birth to the present number of 11 men-a-side in American football. The Canadian style was also more open and made a good impression on the Americans, as the editor of the
Harvard Magenta thought it to be much better than the "somewhat sleepy game now played by our men." Harvard then adopted McGill’s style, which included an egg-shaped ball along with the drop kick and free kick.

Subsequently, Harvard went on to challenge its fierce rival Yale to a game of rugby the following year and Yale was quickly won over. By 1877, the rest of the Ivy League schools had adopted the new style. The Association Football style of play disappeared from American campuses until shortly after the turn of the century, which allowed American football to firmly take root in the US.

It took one man, affectionately known as the “Father of American Football”, Walter Camp, to officially transform rugby football into a new sport. Camp was a legendary player, and later coach, at Yale, who wrote the first book ever published on football. While playing for Yale, he devised the revolutionary changes that transformed the game.

The first was the introduction of the scrimmage, which meant that instead of dropping the ball between two teams locked in scrums, one side would be given possession to plan offensive movements, and the other side would have to try to stop them. Once a score was made, the teams would exchange control of the ball. The scrimmage was initiated to speed up the game, however, it proved to be a complete failure when put into practice, as some teams would keep the ball for entire halves. To solve this problem, Camp decided to adopt the system of downs used in Canada, whereby a team would have three opportunities to move the ball five yards. In 1912, this rule was changed to the present form of four downs allowed to gain 10 yards.

Camp later reduced the number of players per team from 15 to 11 and each player was assigned a specific position to specialize in and a standard arrangement of seven linemen, a quarterback, two halfbacks and a fullback was devised. He also created signal calling and reduced the field substantially in size from 140 by 70 yards to its modern 100 by 53 yard dimensions. Lastly, he revised the scoring system, giving a larger value to touchdowns than field goals, which placed a greater emphasis on running over kicking. Camp’s introductions later set the stage for football’s lasting domination by statistics (yards per carry, total passing and running yardage, etc.).

The new game introduced by Camp did not come without problems, however, as a defining characteristic of early American football was its extremely violent nature. Injuries were rampant and fatalities would occur on a regular basis. In 1905 alone, 18 people lost their lives and 154 more were seriously injured. To remedy this problem, the forward pass was brought into the game in 1910. This final major development to the game introduced some finesse and precision to a sport that had previously been based on sheer physical force.

Canada developed its own version of football, separate from the British and American models, which became basically a hybrid of the two. After the McGill-Harvard game in 1874, the Canadian game ceased to influence the American game and the roles became reversed. Canada moved cautiously away from rugby towards American Football, which became the major reason why Canadian and American schools soon ceased playing exhibition games against one another. Like the Americans, Canada dropped the rugby scrum in the 1880s and adopted the scrimmage. However, it was a compromise between the two styles, as it was only a three-man scrimmage, which attained more motion and flow than the American game. The game also became notable for kicking exchanges rather than for running or lateral exchanges.

At this time, Canadian rugby-football was still highly disorganized, as games were played sporadically between various colleges and universities in Ontario and Quebec. There were various rugby unions that organized competitions, and many disagreements arose between them over rules until the Canadian Rugby Union (CRU) was formed in 1891. A hodgepodge of rule adjustments...
was made by the CRU, many at the behest of former Toronto Varsity captain J.T.M. “Thrift” Burnside. He proposed 12-men-a-side and three downs to acquire 10 yards, both still in place to this day, along with the continued use of the larger field. These rules stand out as the primary defining features of the Canadian game. Many other minor variations were introduced in the years thereafter, leading up to the last major rule introduction in 1931, when the CRU finally approved the forward pass for all leagues. This led to the dropping of the old oval rugby ball, and a new streamlined and narrower ball was adopted in order to facilitate passing. As a result, the Canadian game finally resembled less of rugby and became a variation of the American game.

The development of football from an amateur game to a professional one was an even longer process than the initial creation of the game. The first professional team in the United States appeared in 1894 in Greensburg, Pennsylvania. The first pro league was not established until 1920 with the advent of the American Professional Football Association, which consisted of 14 teams, all located in the Midwest. It was not until the mid-1920s that the pro game achieved respectability, which was largely due to the arrival of the talented and exciting running back Red Grange. He was nicknamed the “Galloping Ghost and toured the nation with the Chicago Bears in 1925, filling stadiums wherever he went. The pro game continued to grow and by mid-century, it was one of America’s most popular sports. The advent of the Superbowl and merger of the two top leagues allowed football to easily attain the crown of most popular sport in America in the 1970s, which has continued to this day.

Professional development was much slower in Canada. The Intercollegiate Union was set up in 1898, which awarded Canada’s oldest football trophy, the Yates Cup, to the top college or university team in Ontario and Quebec. The winner would advance to the CRU playoffs for the Dominion Championship against the senior winner of the rugby union playoffs. In 1909, Governor-General Lord Grey donated the Grey Cup as an award for the winner of the Dominion Championship. The trophy was coveted by all teams and served to increase the professionalism in the Canadian game, as well as to finally attract western teams to the competition in 1921, giving it a national identity. University teams finally quit the competition in 1934, as the proliferation of American professionals into Canadian clubs had been increasing. The Canadian Football League was finally formed in 1958. It still exists today after much turmoil over the years, including the allowance of American teams for a few short years in the 1990s.

The origins of North American football and its successive development into a popular professional sport is a path that encompasses two nations, who each developed their own take on the popular 19th-century British sports of rugby and Association Football. It is the variations that emerged during those formative years which explain the differences in the Canadian and American games played today.
Hindsight

A selection of new books and products we believe may be of interest to History Magazine readers.

The History of Death: Burial Customs and Funeral Rites, from the Ancient World to Modern Times looks at the social history of death. Author Michael Kerigan plays Virgil to our Dante as he takes us on a tour of how we handle death, from burial customs of early civilizations to the Victorian’s cult-like devotion towards mourning, from how Europeans handled the Black Plague to how people commemorate death today. With black and white illustrations on nearly every page, this will make for an interesting read. However, perhaps not before bedtime. From The Lyons Press, 192 pages including bibliography and an index. Priced at about $20 US or $25 CDN for the paperback. ISBN: 978-1-59921-201-2.

The Whiskey Merchant’s Diary: An Urban Life in the Emerging Midwest tells the story of German immigrant Joseph J. Mersman, who lived in Cincinnati and St. Louis, then the frontier of America. Edited by Linda A. Fisher, the diary covers the period from 1847 to 1853 and chronicles the successes and failures of a man in the 19th century. Of interest are the descriptions of Victorian etiquette, his views on gender, entertainment and his suffering due to his “confounded complaint” of syphilis. The work also features illustrations and maps of the period. From Ohio University Press, 432 pages including an index. Priced at about $49 US/CDN for the hard cover. ISBN: 978-0-8214-17460 (paperback).

The annual Frankfurt Book Fair is an event of interest to book lovers around the world and continues a tradition that dates back more than 500 years. A History of the Frankfurt Book Fair by Peter Weidhaas, the director of the Frankfurt Book Fair, and translated by Carolyn Gossage and Wendy Wright, looks at the history of the event from its early days as a market selling printed and hand-copied books to being the most important book fair for international deals and trading, with a strong focus on the 20th century. From Dundurn Press, 280 pages including several black and white illustrations and an index. Priced at about $40 US/CDN for the hard cover. ISBN: 978-1-55002-744-0.

The 19th-century authors Catharine Parr Traill and Susanna Moodie are famous for their works about pioneer life in early Canada. Sisters in Two Worlds: A Visual Biography of Susanna Moodie and Catharine Parr Traill chronicles the women’s early life in England and what they experienced once they came to the backwoods of Upper Canada, a far cry from their manor home as children. Full of colorful illustrations from the authors themselves and photographs of the places they knew, author Michael Peterman has created a delightful book. From Dundurn Press, 280 pages including an index. Priced at about $45 US/CDN for the hard cover. ISBN: 978-0-385-66288-8.

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The Lost Days of September 1752

Huck DeVenizio tracks the change to our modern-day calendar

We experience enough clock confusion when we cross time zones, recite “Thirty days hath September...” and semi-annually spring ahead or fall back an hour. What if we had to spring ahead a week and a half? That’s what American colonists, and all subjects of the British Empire, did in 1752 when they replaced the Julian calendar with the Gregorian calendar and skipped 11 days.

Check your favorite 1752 calendar. The day after Wednesday, September 2, was Thursday, September 14. In 1752, September hath 19 days.

The Julian calendar, introduced under Julius Caesar in 46BC and implemented the following year, served well for centuries until its slightly overstated year of 365.35 days became out of sync with the seasons. Pope Gregory XIII decreed in 1582 that a revised calendar would be used, keeping Easter where it belonged in the spring.

The new tropical year (from one vernal equinox to the next) was 365.2422 days long. Italy, Spain and several other European countries adopted it immediately as their official calendar, but most non-Catholic nations took longer. The British Empire waited 170 years, but was not the last. Russia and Greece, among a few others, did not accept the Gregorian calendar until the 1900s.

The year of acceptance affected the number of days to be skipped. Early adopters skipped 10. By 1752, it was necessary to leapfrog 11 days. Russia missed 13 days, jumping from 31 January 1918 to 14 February 1918.

In England, the jump was said to cause protests by people who feared that the government was stealing days from their lives. This tale has been refuted, but anti-reform candidates used the slogan, “Give us our Eleven Days”. Such a correction today would likely generate untold concern over work schedules, interest charges, rent payments and getting reservations at restaurants when 12 days of birthdays were being celebrated on the same afternoon. (At least the colonists did not have to worry about planes falling out of the sky because of Y2K computer glitches.)

The calendar change created dating problems that still linger. The year of acceptance affected the number of days to be skipped. Early adopters skipped 10. By 1752, it was necessary to leapfrog 11 days. Russia missed 13 days, jumping from 31 January 1918 to 14 February 1918.

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The calendar change created dating problems that still linger. One week before 16 September 1752 (in what was called the New Style) was 29 August (in the Old Style). What should people do? Should they back-convert all the Old Style dates to New Style? If your ninth birthday had been 10 July 1752, did it make sense for your birthday to fall on 21 July in the future?

Another issue caused further confusion. It seems natural now that December 31 marks the end of one year and New Year’s Day is January 1. But that was not the universal practice. Depending on where you were, the new year began on different days, such as December 25 (Christmas), March 25 (the Annunciation) or, in Eastern European countries, September 1 (beginning of the taxation cycle). In England, the stroke of midnight was all that separated 24 March 1745, from 25 March 1746.

When the New Style calendar was adopted, the British also chose to adopt January 1 as the first day of the year.

Thus, some historical dates took a second bewildering punch, which includes the birthday of George Washington. He was born on 11 February 1731, by the calendar then in effect. Under the New Style calendar, his birth date was February 22. Furthermore, since he was born between January 1 and March 25, even the year of his birth changed under the New Style — to 1732. This presents a birthday/math/calendar problem: If Washington was born on 11 February 1731 (Old Style), how old was he on 11 February 1761? He was not 30 but, time zones aside, he was 11 days shy of 29.

Above: Pope Gregory XIII issued the papal bull Inter gravissimas to promulgate the new calendar on 24 February 1582. Right: Thomas Jefferson’s birthday was 2 April under the Old Style calendar (as noted on his tombstone), but is now celebrated on April 13 under the New Style calendar.
Features We Are Working on for Future Issues of History Magazine

Titanic:
David Norris takes us on a first-class tour of the ill-fated ship, which now rests at the bottom of the Atlantic. See who was on the ship’s first — and last — voyage and what happened to its crew and passengers after it hit that infamous iceberg.

The Teddy Bear:
Hero of childhood adventures, beloved bedtime companion and one of the most popular toys in history, the teddy bear is cherished by millions, both young and old. Phill Jones looks at the international history of the teddy bear.

Panoramas, Dioramas and Cycloramas:
David Norris looks at this now forgotten entertainment which once enthralled millions.

Britain’s Royal Corps of Engineers in Canada:
The Quebec Citadel, the Rideau Canal and the Cariboo Road have all contributed significantly to the establishment of Canadian sovereignty. They were also all built by Britain’s Royal Corps of Engineers. Art Montague investigates.

How the Great Depression Gave America the Blues:
Heath Lowrance looks at early American music and how it reflected what was happening at home and beyond.

The Carnatic Wars:
Pamela D. Toler details the Anglo-Franco struggle for control of India during the 18th century.

The Story of Rubber:
Few products have impacted the modern world more than rubber. Edward E. Deckert and Constance R. Cherba bounce around the history of this ancient space-age material.

Hockey:
It’s played by boys and girls, men and women of all ages — as passionately in Porkalompolo, Sweden, as in Podunkville, US. Author Al Henderson takes to the ice in search of hockey’s storied past.

That Old Black Magic: The Great Illusionists:
Doug Elliott conjures up the history of a world where anything was possible.

The features mentioned here are in preparation and are planned for future issues. However, circumstances may affect the final content.
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