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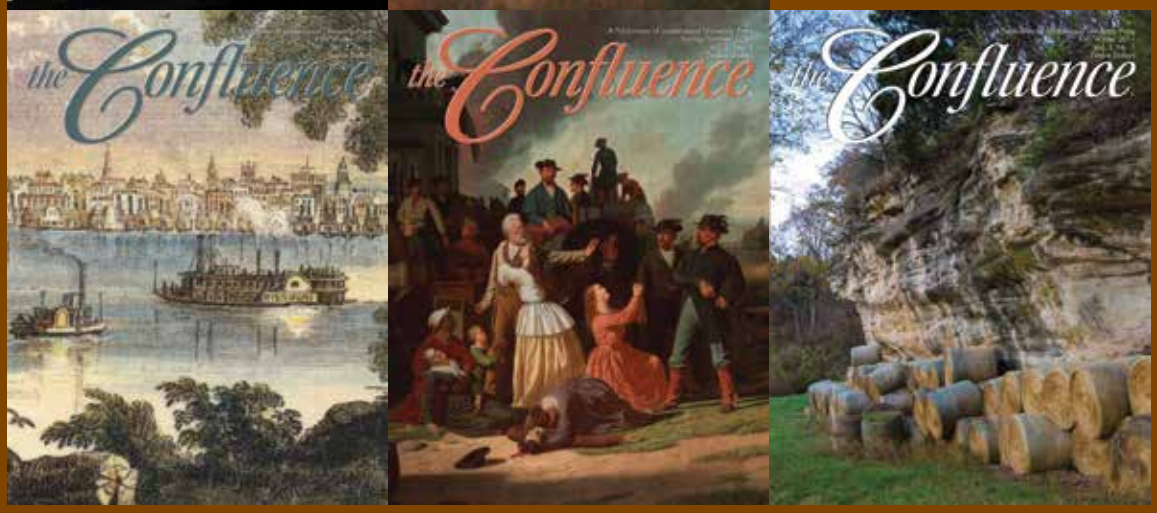

Lindenwood University's Regional Studies Journal

MISSOURI HUMANITIES COUNCIL

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CONTENTS

COVER IMAGE

Eero Saarinen's first proposal for the Gateway Arch seems futuristic even today, with its glass-fronted observation area overlooking the Mississippi River. For more on the plan for the Jefferson National Expansion Memorial and the role of Luther Ely Smith, see Mark Tranel, "Luther Ely Smith: Father of the Gateway Arch."

The Confluence is a regional studies journal published by Lindenwood University and dedicated to the diversity of ideas and disciplines of a liberal arts university. It is committed to the intersection of history, art and architecture, design, science, social science, and public policy. Its articles are diverse by design.

the Confluence

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FROM THE EDITOR

You probably noticed that our inside cover is different this time. We're taking space to announce that *The Confluence* won the Missouri Humanities Council's Distinguished Achievement in Literature Award. We are, of course, most honored to receive such recognition.

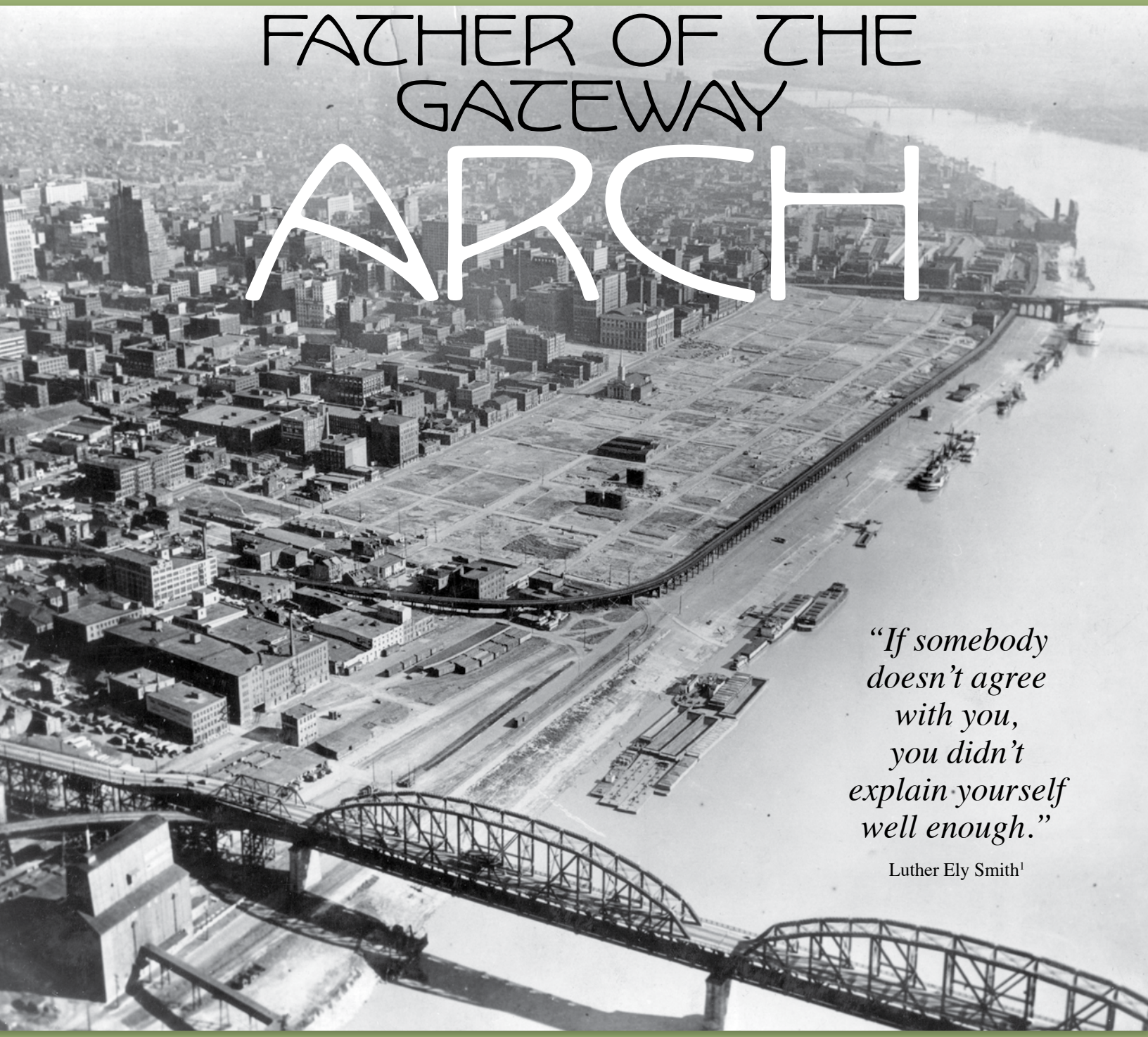
Most of all, it is recognition of all those who are behind *The Confluence*. It's really the work of many hands—those who write for the journal and share their scholarship; those who edit and proofread and design it; and most of all, those at Lindenwood University who have been its greatest advocates—our Provost Jann Rudd Weitzel and our President James Evans.

Ultimately, the role of the humanities and publications like *The Confluence* is to enhance the quality of our lives by informing the conversations about them. That's what gives us the perspectives of time (and change across the great span of the human experience), the power of ideas, the roles of people great and small in shaping the course of human events. It is what allows us to make sense of the world—and the nation, and our community—around us. Our authors seek to answer such questions as, "Why are things the way they are?" and "How did they get that way?" When all is said and done, the humanities are about starting, nurturing, and perpetuating a collective conversation.

Like all conversations that can wander and cover a wide range of topics, so too it is with *The Confluence*. We are, we have said only half-jokingly, eclectic by design. With the publication of *The Confluence*, we at Lindenwood want to help facilitate those conversations that are essential to building a sense of community and understanding of places in it, eclectic as they might be. We have intentionally steered clear of the old and tired topics, and sought articles that give fresh perspectives of our community. Our job as a university is not just to educate young minds, but to play a role in our community as well. It is efforts like *The Confluence* that connect all of us, and the humanities that connect institutions like mine with communities like ours.

We're proud to receive such an award, but we're especially proud to play some small part in the great regional conversation about who we are and why we're that way. With every issue, we reiterate Linda Richmond's comment on *Saturday Night Live's* "Coffee Talk" — "talk amongst yourselves."

LUTHER ELY SMITH: FATHER OF THE GATEWAY ARCH



"If somebody doesn't agree with you, you didn't explain yourself well enough."

Luther Ely Smith[1]

BY MARK TRANEL

When standing at the Arch grounds today, it's hard to imagine that it was almost completely empty space like this for more than two decades after the old warehouses and businesses were razed during the New Deal. *(Image: National Park Service-Jefferson National Expansion Museum)*

Trained as a lawyer, Luther Ely Smith (1873-1951) was at the forefront of urban planning. As chairman of the City Plan Commission for St. Louis, he was the first in the United States to create the position of city planner. He hired noted urban planner Harland Bartholomew (for more on Bartholomew, see *The Confluence*, Fall-Winter 2009). In many ways, Smith dedicated his life to civic affairs as diverse as creating what became the Muny Theater and serving on a committee to reform the selection of judges in Missouri. Although the Jefferson National Expansion Museum consumed much of his time, he died before work began on the Arch. *(Image: National Park Service-Jefferson National Expansion Museum)*

As St. Louis pursues an initiative to frame the Gateway Arch with more active and esthetic grounds, and with a goal of completing the project by 2015, the legacy of Luther Ely Smith and his unique role in the creation of the Jefferson National Expansion Memorial (the national park surrounding the Arch) is a reminder of the tenacity such major civic projects require. What is today a national park was in the mid-nineteenth century the heart of commerce on the Missouri and Mississippi rivers; forty years later it was the first dilapidated urban development district in St. Louis. Smith was a man of many and varied interests, but one enduring passion. From the day in November 1933 when he met with Mayor Bernard Dickmann to propose a national memorial for the riverfront site to his death on his way to his law office in 1951, Smith was the central figure in the development of the Memorial, which was both interrupted by and took advantage of the tumultuous times of the 1930s and 1940s.

Born in Downers Grove, Illinois, in 1873, Smith spent his formative years in Massachusetts. He graduated from Williston Northampton School in East Hampton, Massachusetts, in 1890 and from Amherst College in 1894. From Amherst, he came to St. Louis to attend Washington University, from which he received his law degree in 1897. In 1898, he volunteered for military duty in the Spanish-American War, serving as a lieutenant in Cuba with the Third U.S. Volunteer Engineers. After completing his tour of duty, Smith returned to St. Louis and was admitted to the Missouri Bar in 1899.

Within a year, Smith had taken on his first civic project. One aspect of Smith's legacy is his wide-ranging commitment to civic services. He was one of the leaders who formed the Open-Air Playground Committee that developed the first public playgrounds in St. Louis.[2] He chaired the Citizens' City Plan Commission from 1916 to 1922. However, Smith's early years of civic service in St. Louis were interrupted only by his second tour of volunteer military service in World War I. He served as a captain of field artillery in 1917. Smith was chairman of the General Council on Civic Needs from 1929 to 1938, which led the development of the McKinley Bridge, among other infrastructure improvement projects important to the rapidly growing St. Louis economy. In 1944, then-Mayor Aloys P. Kauffman appointed Smith to the Citizens Committee for Post War Improvements and Employment which completed its work in less than a year.

Smith's interests were not limited to city capital improvement projects. When the City of St. Louis established a Civil Service Commission in 1941, he was appointed to leadership roles, first as vice-chairman until 1945 and then as chairman until 1950. From 1939 to 1941, Smith was chairman of the organization committee for the Missouri non-partisan court plan, which successfully led an initiative petition to amend the Missouri Constitution to appoint appellate court judges by merit rather than political connections.[3] He was also president of the St. Louis City Club.[4] A national movement, city clubs created a forum for the discussion of progressive responses to civic challenges, an ideal social network for Smith.

Smith's civic service was not just local. In June 1928 Calvin Coolidge appointed Smith a charter member of the George Rogers Clark Sesquicentennial Committee. Coolidge was a year behind Smith at Amherst, where they became friends. Smith's service on this committee to develop a memorial to the Revolutionary War hero was crucial

Retaining rail service through the area being razed presented Smith with a particular problem—one that Saarinen had to address as well. *(Image: National Park Service-Jefferson National Expansion Museum)*

View of the future Gateway Arch site from the west. *(Image: National Park Service-Jefferson National Expansion Museum)*

to the Gateway Arch because it would serve as a model for his thinking about the St. Louis riverfront. The committee pursued a strategy of local-federal funding to redevelop an abandoned warehouse district on the banks of the Wabash River in Vincennes, Indiana, and build the classical style George Rogers Clark Memorial.

Although all these civic accomplishments are notable, they pale in comparison to Smith's labors on what became the Jefferson National Expansion Memorial. Two factors made it a laborious project: the site itself and the impact of the Great Depression and World War II.

THE SITE

A limestone bluff rising above the Mississippi River drew fur trader Pierre Laclede Liguest to the site in 1763. He was looking for a flood-proof location adjacent to the river to establish a post near the confluence of the Missouri and Mississippi Rivers for his New Orleans-based company. After surveying the site, Laclede was moved to say, "I have found a situation where I intend to establish a settlement which in the future will become one of the most beautiful cities in America."[6] Laclede's stepson and clerk Auguste Chouteau laid out the site with a grid system of north-south and east-west streets. Although the fur trade prospered, the site was not expansively developed over the next half-century, as it required only a small settlement to support it. The population of St. Louis was about 1,000 when Lewis and Clark embarked from the area in 1804 at the beginning of the Corps of Discovery expedition.[7]

The pace of development was dramatically different after the landing of the steamboat *Zebulon M. Pike* in 1817.[8] The City of St. Louis incorporated in 1823. The population exploded from just over 14,000 in 1830 to 105,000 in 1850 as St. Louis became the second largest port by tonnage in the country. Chouteau's grid streets were filled in with dense low-rise residential and commercial structures. The sandy beach that served the keelboats of the fur trade was replaced with wharves to handle the thousands of annual steamboat arrivals transporting both freight and passengers.

The present-day grounds of the national park surrounding the Gateway Arch is approximately the area that was destroyed in the Great St. Louis Fire of 1849. On May 17, crewmen of the New Orleans steamboat *White Cloud* failed to completely extinguish a mattress fire. The reignited fire spread from the *White Cloud* to the adjacent steamboat *Edward Bates*. The *Bates* eventually broke free of its mooring, igniting 21 other boats; that conflagration sparked fires in the docking area and finally the buildings of the forty-block commercial district.[9]

The area was rebuilt with over 400 three- and four-story iron and brick structures.[10] As devastating as it was, the

fire did not slow the pace of commerce in the port of St. Louis. From 1849 to 1852, St. Louis was the most active steamboat port in the United States, averaging 3,100 arrivals a year. The steamboat-era riverfront commercial district was not just an office and warehouse district. Some of the earliest manufacturing in St. Louis was producing machinery for steamboat engines and related mechanical parts. Among the cities that produced machinery for steamboats, St. Louis was the leader in 1860 with thirty machine shops employing 1,500 workers. That same year it was second in foundries, producing the metal for steamboat parts with 28 foundries employing an additional 1,500 to 1,800 workers.[11]

Then came the railroads. Although the first railroad in St. Louis, built in 1852, was the 4 ½-mile line from downtown to the village of Cheltenham (present-day Dogtown), it was not until completion of the transcontinental railroad in 1869 that steamboats were replaced as the primary system of freight transportation.[12] A precipitous decline in commercial riverboat traffic handled through the port of St. Louis began with the westward expansion of rail service after the Civil War. St. Louis, meanwhile, continued to prosper. Its population grew to over 450,000 by 1890, but the forty blocks of mid-nineteenth century development on the riverfront became little more than a historical artifact of the glory days of the steamboat and outdated construction techniques. The combination of growth and obsolescence created competing interests in downtown St. Louis. The owners of the newer high-rise retail and office buildings west of Broadway felt the riverfront district was a blight on their property values. The owners of the riverfront district properties wanted support to maximize the return on their investment.

As Luther Ely Smith gazed to the south while crossing the Eads Bridge on his return trip from the dedication of the George Rogers Clark Memorial in November 1933, he was inspired to propose a national memorial to replace the dilapidated St. Louis riverfront district.[13]

Smith's contribution was not the originality of the idea. He was a member of the City Plan Commission, which in June 1928 released "A Plan for the Central River Front — St. Louis." The Plan included, among its nine independent projects, acquisition of all property between Third Street and the Mississippi River from Spruce Street to Franklin Avenue for a riverfront plaza.[14] The plan was updated in June 1933 with more details on the riverfront plaza. It proposed little more than open parkland—grading, paving, ornamentation, lighting, and planting. Smith added to that concept the critical element of a national monument to commemorate both Thomas Jefferson as the key national figure and St. Louis for its local role in settlement of the West.

TURBULENT TIMES

On February 26, 1947, Luther Ely Smith, acting in his capacity as president of the Board of Trustees of the Jefferson National Expansion Memorial Association, wrote a letter to St. Louis civic leaders. In it, he detailed the status of the project, particularly the problems encountered in the process of pursuing the vision of a St. Louis riverfront memorial since the project's inception in 1933.[15] Some of the problems had been solved, but typical of Smith's modesty, the letter did not recount in overcoming them. There remained, Smith said, a long list of more problems yet to be addressed.

At first the project progressed quickly. Smith called St. Louis Mayor Bernard Dickmann, and proposed a meeting to discuss the idea born on the Eads Bridge for a riverfront national memorial. At the December 15, 1933 meeting in the mayor's office, Smith described to the assembled civic leaders his

When Bernard Dickmann (1888-1971) became mayor of St. Louis in 1933, he was the first Democrat to hold the office in a generation. In many ways, Dickmann transformed the city; during his tenure the city enacted the Smoke Ordinance that ended the "midnight at noon" days caused by air pollution and built a modern African-American hospital in addition to acquiring the land for the Gateway Arch. He transformed the city's political landscape as well; as African-Americans moved to the Democratic Party nationally, they did so locally as well in support of Dickmann. *(Image: St. Louis Public Library)*

Louis LaBeaume (1873-1961) presented a plan (pictured on p. 8) for the grounds as well. Originally part of the Louisiana Purchase Exposition design staff in 1904, LaBeaume was a prominent St. Louis architect from the 1910s. His firm designed Kiel Auditorium (now the Peabody), and nine buildings at Lindenwood University. *(Image: Missouri History Museum; National Park Service-Jefferson National Expansion Museum)*

LaBeaume's plan for the St. Louis waterfront. Originally part of the Louisiana Purchase Exposition design staff in 1904, LaBeaume was a prominent St. Louis architect from the 1910s. *(Image: National Park Service-Jefferson National Expansion Museum)*

proposal for a national memorial to Thomas Jefferson and his role in the settlement of the American West. The concept he presented was a Washington mall-type classical monument centered in the riverfront plaza in the City Plan Commission's design. They decided to appoint a working group to develop a strategy for pursuing the memorial project; Smith was to lead it.

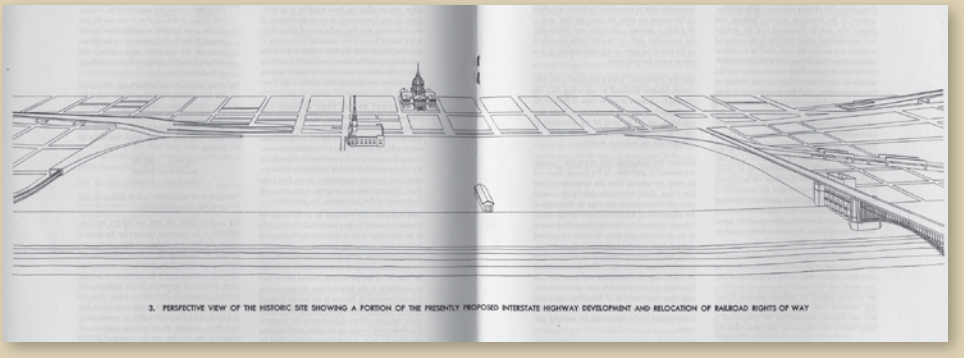
Following the strategy he had seen successfully applied by the George Rogers Clark Memorial Committee, Smith led the working group in parallel local and federal initiatives. Through the work of five subcommittees (Legislative, Publicity, Finance, Historical Data, Plan and Scope) the working group was well prepared in presenting its case to both local and federal government officials. Smith's work with St. Louis architect Louis Labeaume produced a draft budget of $20,000,000 for the envisioned memorial. With another $10,000,000 estimated for land acquisition and demolition, the project started out with an estimated cost of $30,000,000, a staggering amount in the throes of the Depression.

As the first formal step in the strategy, the working group incorporated the Jefferson National Expansion Memorial Association in April 1934. While the Association was forming, Smith and Mayor Dickmann appealed to the Missouri Congressional delegation for funding. When that approach failed, Smith suggested they redirect their approach to legislation that would establish a national commission. Smith personally wrote to a good number of congressmen in April and May 1934 urging them to approve the commission. Many in Congress opposed establishing the commission because they expected a request for substantial federal funds to follow. With the challenges the nation faced at this point in the Depression, building a memorial was not considered a high priority. But after continued reassurance that this was just to set up a study commission, in June the House and Senate approved, and on June 15, 1934, Franklin Delano Roosevelt signed the bill establishing the United States Territorial Expansion Memorial Commission.

Smith became one of the fifteen Commission members. It held its first meeting in December 1934, during which the Association briefed the Commission members on the memorial plans. In the course of the Association's presentation, Smith was lauded for his contribution. "I have seen men do lots of hard work on important things, but I have never seen such devotion to a cause as Mr. Smith has given to this monument."[16] Smith sustained his level of effort on the project, and on April 13, 1935, the Commission's executive committee approved plans for the memorial—its boundaries, historical significance, an architectural competition for the memorial structure, and the cost estimate of $30,000,000. The full Commission approved the plans on May 1, 1935.

One of the solved problems Smith cited in his 1947 letter was securing a $9,000,000 property acquisition and demolition fund. Smith was actively seeking funding for the project even before the Commission approved the plans. In January 1935 he and Dickmann met with Secretary of the Interior Harold Ickes to pitch the memorial project as a way to create jobs. In the mid-1930s demolition was still a labor intensive process, and more than 400 buildings needed to be razed to redevelop the old riverfront commercial district into a national park. Ickes approved of their approach and arranged for a meeting the next day with Roosevelt, who agreed with the concept of a national memorial to the settlement of the West and suggested Works Relief Fund money as a potential source of funds for the project. This encouraging progress was short-lived. Two months later Smith learned from Missouri Senator Harry S. Truman that the agency to disburse Works Relief Fund money was not yet operating, and suddenly the project was again adrift for lack of funding.

In one respect, 1935 was an opportune time to be seeking federal funding for a public capital improvement project. New Deal programs were investing heavily in such projects. In another respect, it was a very challenging time to be seeking federal funds. The New Deal was administered through a large number of sometimes overlapping and sometimes competing programs. Smith became the pointman for negotiating the New Deal agency maze. What he learned in the process was that the personality of the agency head—as much as the law passed by Congress—would determine whether a project was funded and in what amount. Smith learned that the



Once Smith facilitated razing the buildings on the St. Louis riverfront, the area was almost completely a clean slate for designers; they had to work around only the Old Cathedral and the Old Rock House (pictured on p.10), which was eventually dismantled. This perspective drawing shows both the relocation of the railroad and the proposed interstate. *(Image: National Park Service-Jefferson National Expansion Museum)*

Works Progress Administration (WPA) and the Public Works Administration (PWA) were both potential sources of funds for the project. Smith's role as the connecting link between the Association and the Commission was vital at this point. He organized a letter-writing campaign by Association and Commission members to the administrators of both New Deal programs. The end result was Executive Order 7253, signed by Roosevelt on December 21, 1935, which allocated $3.3 million from the WPA and $3.45 million from the PWA. The Executive Order also required the City of St. Louis to provide $2.25 million as a match to the federal funds.

Fortunately, the source of the matching funds had already been addressed. At the same time Smith was handling funding challenges in Washington, the local effort secured, on April 15, 1935, authorization from the Missouri legislature for the City of St. Louis to vote on $7,500,000 in bonds for the riverfront memorial. The state authorizing legislation required that federal funds be matched at a 3-1 ratio. St. Louis voters approved the bonds

Saloons like this one on Market Street were not only razed, but documented by photographers hired by the National Park Service. The man holding the sign appears in every interior, documenting which building is which. *(Image: National Park Service-Jefferson National Expansion Museum)*

Thought to be the oldest building in the district, the Old Rock House was originally to remain as part of the plan. When it was razed, the stones were carefully numbered and stored, but have since been lost. *(Image: National Park Service-Jefferson National Expansion Museum)*

on September 10. Allegations of voter fraud surfaced a year after the election, made by local interests opposed to the memorial project who were small in number but very aggressive in tactics. It took until May 22, 1938, and no small amount of Smith's time, for a final court decision to not issue a subpoena in response to the allegations. Smith's 1947 letter did state that properties were acquired for the site. Although there were troubles enough securing the financing, Smith became enmeshed in legal challenges from property owners in the proposed memorial site. Within a month of approval of plans by the Commission, 36 property owners filed an injunction in Washington, D.C., to stop expenditure of federal funds for property acquisition. This resulted in one of Smith's many trips to Washington in support of the project. He spent three days in meetings with Department of Justice attorneys. As a result of these discussions, the Commission entered into the case filing an amici curiae brief and affidavits supporting the federal program administrators. Smith's most active role, however, was back in St. Louis. He interviewed property owners to gauge their commitment to the lawsuit and found a number of them actually wanted out. While he considered having them petition for intervention as friends of the court, the process was likely to only delay resolving the case. The Court of Appeals did not rule until March 8, 1937, that federal money could be used to acquire the properties in the project area.

While lawsuits were being resolved, federal program administrators had negotiated acquisition agreements with many of the property owners. Technically, the acquisition and demolition funds were to have been spent within twelve months. The funds were, after all, supposed to help end the Depression by putting people back to work.

Construction—or destruction—engulfed the east end of downtown near the Old Courthouse, pictured here. *(Image: National Park Service-Jefferson National Expansion Museum)*

Luther Ely Smith, right, and Eero Saarinen reviewing a model of Saarinen's plan. It was the closest Smith ever came to seeing the Arch. *(Image: National Park Service-Jefferson National Expansion Museum)*

While over $6 million had been committed to property acquisition, the negotiated acquisitions prices totaled $400,000 less than the available federal funds. Smith did not want to lose those funds on a technicality. On July 1, 1939, he was again in Washington, this time meeting with Department of Justice officials to argue that the project's funds should not be taken away for failure to meet the spending deadline. An agreement was reached for all of the allocated funds to remain committed to the project.

Demolition began October 10, 1939, and continued to May 1942, overlapping the United States' entry into World War II.[17] While planning activities occurred in the 1940s, no progress was made on erecting the memorial. The World War II pause gave the Association the opportunity to focus on a critical funding issue. The Bureau of Internal Revenue determined in May 1937 that contributions to the Association by corporations were not tax deductable. This was one of Smith's most exasperating moments in the entire process. He had solicited contributions to the Association from many of his corporate friends. "We just HAVE to get the ruling reversed. I shall have to leave town and probably the entire country if we don't," he wrote.[18] Initially, Smith argued that contributions should be tax deductable because the purpose of the association was educational. Given the extensive lobbying activities of the Association, the Bureau did not accept that. As time passed, Smith thought to link contributions to support of the competition for the design of the memorial. Smith was a relentless letter writer, and in March 1945 the Internal Revenue commissioner accepted the rationale that the Association was acting on behalf of the federal government to fund the design competition, thus making corporate contributions appropriate.

The fact that the Association could raise tax deductable contributions did not make it easy to do so. While the memorial project now had a cleared site, it had no plans for the memorial. The Association announced in January 1945 that it would hold a design competition budgeted at $225,000. Although 72 years old, Smith was once again the fulcrum on which the project turned. He became responsible for raising the budget. Smith's fundraising efforts were both exhaustive and exhausting. His connections to the St. Louis business community were primarily among the bankers and retailers downtown. Although 60 businesses contributed in the first six months of 1945, Smith raised only $75,000. An indication of the extent of his efforts is found in the letter he wrote to Charles Whitman, former governor of New York, asking Whitman to arrange a meeting for Smith with philanthropist Vincent Astor. Smith met Whitman at an alumni function at the 1942 Amherst commencement and, as he did to virtually everyone, talked about the Jefferson National Expansion Memorial. Smith was very direct in the letter that the purpose of the meeting would be to ask Astor to provide $200,000 for the design competition. Whitman did not arrange the meeting.

Smith did receive assistance from Mayor Aloys Kaufmann, and the design competition fund balance was $185,000 by May 1946. As the fund-raising campaign again stalled, Smith expressed his exhaustion to his son-in-law, downtown retailer Ingram Boyd, Jr. Boyd agreed to contact ten business associates and ask them to contribute $4,000 each to close the gap. Boyd received more polite declines than checks, many citing the impact of the war on their businesses. In a telling act of his commitment to the project, Luther Ely Smith personally provided the $40,000 needed to complete the competition fund.

By this time, the project was taking an obvious physical toll on Smith. His son-in-law wrote, "I think I can see him beginning to weaken."[19] James L. Ford, Jr., President of the First National Bank, wrote, "The poor fellow is sick again, and he does nothing but worry about the Jefferson Memorial and his thoughts as to his obligations to that great cause."[20]

Through continued efforts by Boyd on his father-in-law's behalf, the Association had just under $239,000 in February 1947. This gave it sufficient funds to begin the design competition and make an immediate payment of $6,000 to Luther Ely Smith and subsequent payments of $1,000 until his contribution was completely refunded.

By this time, Smith had secured a commitment from George Howe, a fellow of the American Institute of Architects, to be the competition advisor. The competition opened May 30, 1947, for design concepts. Howe received 172 entries by the September 1, 1947, deadline. Five finalists were selected and given a deadline of February 10, 1948, to submit their project designs. Eero Saarinen's stainless steel arch was the unanimous selection. Smith was ill at the time but did attend the February 18 formal dinner where Saarinen's design was announced.

Luther Ely Smith resigned as president of the Jefferson National Expansion Memorial Association in June 1948 and became chairman of the board. He was intermittently involved in problems that arose regarding parking on the memorial site, relocation of existing railroad tracks, and other technical issues. His main concern was getting federal authorization to build Saarinen's Arch. Congress appeared on the verge of approval when in June 1950 the United States entered the Korean conflict. This delayed

Eero Saarinen won the design competition for the St. Louis Arch from this jury. *(Image: National Park Service-Jefferson National Expansion Museum)*

Congress' approval until May 11, 1954, three years after Smith's death. The *St. Louis Post-Dispatch* led Smith's obituary with the question, "Where in all St. Louis was there a better citizen than Luther Ely Smith?"[21]

EPILOGUE

Others continued the work started by Luther Ely Smith, and the Arch was completed October 28, 1965. The 21st century initiative is in many ways a fulfillment of the vision of the competition advisor hired by Smith, George Howe. "Howe thought Jefferson and the western pioneers would have placed emphasis on living life rather than remembering it." Thus the Gateway Arch and its surrounding parkland are not only a reminder of the legacy of Luther Ely Smith and his civic service but also a living testament to his vision for the St. Louis riverfront.

ENDNOTES

The complete story of the development of the Jefferson National has been told in exceptional detail by Sharon Brown's Administrative History.

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19 I.F. Boyd, Jr. letter to Chester Davis, President of the Federal Reserve Bank of St. Louis, March 11, 1947. Missouri History Museum B23/F5.
20 James L. Ford, Jr. letter to Chester Davis, March 14, 1947. Missouri History Museum B23/F5.
21 *St. Louis Post-Dispatch*, April 3, 1951.

AMERICAN BOTTOM:

The Floodplain between the Bluffs and the Levee

BY QUINTA SCOTT

Top image—The Discharge: Modoc, April 1993
Bottom image—Modoc Rock Shelter

It's some of the richest farmland in the country, but it wants to be a wetland and flood storage area. Therein lies the conflict that has bedeviled farmers on the American Bottom for a thousand years or more.

Once again: Cross the Jefferson Barracks Bridge from St. Louis County, Missouri, into Monroe County, Illinois. Exit onto Illinois Route 3. Turn right on Sand Bank Road and descend the hill to Bluff Road. Spread out before you is the American Bottom, that vast Mississippi River floodplain that extends from Alton to the Kaskaskia River, across which the river once meandered in several different channels, depositing rich alluvial soil and leaving behind wetlands before settling in its modern regime. This is the second of three articles on the interrelated elements of the American Bottom: the sinkhole plain and bluffs; the bottomland floodplain between the bluffs and the river levees; and the batture lands beyond the levees, the islands, and the river's edge.

The Mississippians at Cahokia and the satellite communities who farmed this floodplain over a thousand years ago grew several varieties of corn.[1] The French priests who settled Illinois Country—the Seminarians at Cahokia among the Tamora in 1699 and the Jesuits among the Kaskaskia on the narrow peninsula between the Mississippi and Kaskaskia rivers in 1703—grew wheat and "maize-otherwise 'Turkish corn.'"[2] Modern farmers who till the American Bottom grow wheat, corn, soybeans, and vegetables. All faced the same problem: they farmed frequently flooded lands. All three—the Mississippians, the French, and the Euro-Americans beginning in the mid-nineteenth century—devised ways of farming wet, swampy fields, all of which worked except when they didn't.

When the French arrived at the beginning of the eighteenth century, they found a landscape dotted with lakes and covered with prairie grasses along the ridges, wetland vegetation in the swales, and bottomland forests along the creeks and Mississippi. Carr Creek, Fountain Creek, Maeystown Creek, Fults Creek, Prairie du Rocher Creek, and Barbeau Creek streamed out of the uplands, deposited their alluvial fans at the edge of the bluff, and spread out—flowing parallel to the Mississippi to their confluences with the big river where floodwaters were returned to the Mississippi.[3]

Today, Barbeau Creek streams out of the uplands and flows to the Mississippi through The Discharge, one of the few places in the American Bottom where you can still see the ridges and swales that once defined the landscape. Archaeologists, sifting down through the layers of human habitation at the Modoc Rock Shelter, learned which critters inhabited this swampy place: mink, raccoon, muskrat, swamp rabbit, river otter, and beaver. The creek and The Discharge supported many species of fish, mussels, turtles, ducks, and geese. Migratory waterfowl rested and fed here during their spring and fall migrations. Archaeologists found evidence of birds seldom seen in Illinois today—Brown Pelicans, Mississippi Kites, Sandhill Cranes, and the extinct Passenger Pigeon. Fish spawned here in the spring. Water tolerant trees—cottonwood (*Populus deltoids*), sycamore (*Platanus occidentalis*), hackberry (*Celtis occidentalis*), sweet gum (*Liquidambar styracififlua*), swamp oak (*Quercus bicolor*), white walnut (*Juglans cinerea*), black walnut (*Jublans nigra*), pecan (*Carya illinoinensis*), and sugar maple (*Acer saccharum*)—forested the bottomlands.[4]

Finally, when a river—unencumbered by levees—floods, it spreads across its floodplain and deposits layer upon layer of rich alluvial soil. While levees may prevent the river from nourishing the land with new deposits of alluvium, they protect valuable crops and the livelihoods of the farmers who grow them. And when a levee breaks, torrents of water can gouge scour holes in the landscape, crumple houses and carry them away, rip corn stalks out by their roots and wrap them around low-hanging utility lines, washing layer upon layer of sand across the fields.

Lunsford-Pulcher Mound at the edge of Fish Lake

On private land to the north of I-255 is the Lunsford-Pulcher site, a satellite village of the Mississippians at Cahokia, settled about 1,000 years ago. It is the largest mound community south of Cahokia, a center of thirteen mounds, seven of which remain. Decades of farming may have changed the shape of what may have been platform mounds and reduced their elevations.

Late Woodlands people (600-750 AD) on the American Bottom grew indigenous crops: tobacco (*Nicotiana sp.*), squash (*Cucurbita sp.),* oily seeds like sunflower (*Helianthus annuus*), starchy seeds like lambsquarter (*Chenopodium album*), erect knotweed (*Poluygonum erectum*), maygrass (*Phalaris caroliniana*), and a little barley (*Hordeum pusillium*), but no maize (*Zea mays*). Emergent Mississippian people (750-1000 AD) grew indigenous crops and maize. So did the Mississippians at Lunsford-Pulcher, but with a twist.

In 1963 archaeologists examined aerial photographs of the Lunsford-Pulcher site, found alternating rows of light and dark stripes, and speculated that these were evidence of gardens or cornfields, planted in ridges and furrows. Farmers used hoes—fashioned from flint, chert, animal bone, or stone—to break the soft, sandy silt and heap it into ridges. The furrows between the ridges may have been used to capture and hold rainwater, a primitive form of irrigation. Or, the ridged gardens may have allowed Mississippian farmers to cultivate the waterlogged fields of the Lunsford-Pulcher terrace by raising the platform for seeds and giving roots reasonably dry soil in which to grow.[5]

Model of Long Lots—Fort du Chartres Museum

The Mississippians disappeared from the American Bottom by 1500. The French arrived two centuries later. Wherever the French settled in Illinois, Missouri, or Louisiana, they laid out their fields in long lots, narrow parcels of land, along navigable streams. The Museum at Fort de Chartres exhibits this model of how the French at Prairie du Rocher settled it in 1722, laying out their long lots between the river and the bluffs and giving each landowner access to the river and variations in topography and soil conditions: fertile soil, sandy soil, timber, meadow, swamp, and bluff.

French farmers used oxen to pull their primitive plows and found turning the animals and the plow at the end of each row time-consuming and dangerous. Hence, they plowed long rows, moved to the other side of the field and plowed another again, working in a tighter and tighter circle. Finally, they left a ditch in the middle of the field to drain off excess water. Their measure was an arpent, the equivalent of 192 English feet. Each field was two to four arpents wide and forty to sixty arpents deep.[6]

In 1715, a Canadian official of the French government reported that the settlers at Cahokia "were living there at their ease; as grain thrives in the region, they have built a mill." At Kaskaskia, Zebedee Le Jeune sowed the first bushel of wheat in March 1718; in July he harvested ninety. The Jesuits and the Kaskaskia sowed their wheat in the spring, harvested it in the summer, and turned their fields over to the cattle, which browsed on the stubble and manured the fields in the fall and winter. They used primitive tools—a wooden plow with a strip of metal tied to it with a piece of rawhide built by Zebedee for breaking the soil, a wooden harrow for tilling, and a scythe and sickle for harvesting the grain.[7]

Winter Wheat Field

American Bottom: Onemile Race Creek Ditch

Modern American farmers in the American Bottom grow wheat, corn, and soybeans for the national and international markets. A few grow vegetables for the local market. They plant wheat in September and harvest it the following June. Corn goes in the spring, after the soil has warmed and is moist. Once they harvest the wheat, they sometimes plant soybeans, which have a short growing season. Thanks to effective levees and drainage systems, they can be almost certain that they will harvest their crops season after season. Both the state and federal governments have assisted them in that certainty.

In 1849, Congress granted Louisiana "those swamp and overflowed lands, which may be or are found unfit for cultivation" in order that the state of Louisiana might sell the land, drain it, and construct levees. The following year Congress extended the act to states bordering the Mississippi, including the State of Illinois. The states sold the land to pay for levees. In 1852, Illinois granted the swamplands to the counties, which designated what was swamp and what was not, "generally taking all the unentered lands,—that is, land that had not been sold through United States Land Offices."[8]

By the end of the nineteenth century farmers started digging drainage ditches to siphon excess water from their fields and building levees to control flooding.

Soon after the state handed swamplands over to the counties, farmers in the American Bottom began the task of digging open ditches and using creeks to drain the network of swamps and sloughs that crisscrossed the floodplain to make it somewhat more reliable for farming. They dug down through the Cahokia Formation or recent alluvium; the loamy alluvial fans deposited by the streams, carrying loess out of the upland; the silt and clay deposits of abandoned channels of the Mississippi and its backswamps; and the sandy deposits, point bar and channel deposits, made by the river as it meandered downstream. Even today, the ditches that drain the American Bottom are open channels that siphon excess water through culverts in the levees and to the river. Early on the work was haphazard and created legal difficulties between landowners over what ditches could be located where.

In 1870, the new Illinois Constitution authorized the General Assembly to write laws allowing landowners to run drainage ditches across adjoining properties. The following year, the legislature passed a comprehensive law that set up procedures for landowners to petition county courts to build drainage works, to assess and collect costs from landowners who benefit, compensate those landowners whose land would be ditched, and appoint three commissioners for each district. The law was found unconstitutional in 1872.[9]

Lock at the mouth of the culvert in the levee at the Fountain Creek Pump Station during the 2011 flood

In 1859, the Illinois General Assembly approved the construction of a levee from Prairie du Pont in St. Clair County to Harrisonville in Monroe County and appointed four commissioners to "lay out and establish a levee or embankment of sufficient height and strength, in their opinion, to prevent the overflow of water from the Mississippi River, over the lands lying between said levee and the bluffs." The law gave the commissioners the power to tax landowners protected by the levee.[10]

Not until 1879 did the General Assembly amend the Illinois Constitution to allow for both drainage and levee-building. They did so with two laws, the Levee Law and the Drainage District Law, which reinstated the provisions of the 1871 law but added legal appeals for landowners unhappy with assessments.[11]

Within a year farmers in Monroe County began forming levee and drainage districts: the Columbia Levee and Drainage District No.3 in 1880, followed by the Harrisonville and Ivy Landing Drainage District No.2, Stringtown and Fort Chartres Levee District No. 5, and the Fort Chartres and Ivy Landing Levee and Drainage District No. 5.

By 1921, the Columbia District had dug sixteen miles of ditches, which emptied into Fountain Creek through four large tile drains. Embedded in the Harrisonville district was the Moredock and Ivy Landing Drainage District No. 1, which constructed twenty miles of ditches that connected to the Mississippi through a culvert and lock in a levee. The Harrisonville District constructed fifteen miles of ditches that emptied into the Moredock District's main ditch.

Within the same period the Columbia District had built 22 miles of levee and the Harrisonville District 20 miles of levee between Fountain Creek and Ivy Landing. They installed culverts and locks where ditches and creeks met the levees. They closed these when the Mississippi flooded. They kept the locks open when the river flowed at normal levels so water in the ditches and creeks could drain.[12]

Terry Springbrook and Mueller's Cypress Grove

Between 1901 and 1903, the eastern division of the Iron Mountain Railroad, called the St. Louis Valley Railroad, laid a single track across the American Bottom and added a second track in 1909. By 1963, the tracks ran close to the bluffs and on a low embankment, a levee that restricted the movement of water from the bluffs to the river. All the creeks, save Fountain Creek, ran through culverts under the embankment. At Fountain Creek the tracks ran over a bridge, at Moredock Lake across a trestle.

The springbrook that heads at Terry Spring runs through a culvert under Bluff Road, across a narrow floodplain, through a culvert under the railroad embankment, across Herbert Mueller's farm, and through a culvert under Steppig Road to Little Carr Creek. The springbrook floodplain lies two feet lower in the landscape than the surrounding farmland, a place Mueller found impossible to dry out. In 1963, Mueller planted a cypress grove right up against a railroad embankment that made drainage from the small creek that headed at Terry Spring difficult.

Levee Road near Fountain Creek

After massive floods in 1936, Congress authorized the Flood Control Act of 1936, which made it the mission of Corps of Engineers to built flood protection across the entire nation. It was also geared at providing Depression-era jobs and help to cash-strapped communities and states that needed flood control projects. Again Congress required the states and districts to provide rights-of-way for construction of levees and agree to maintain them, but it relieved them of the necessity of paying their third of the cost. Between 1936 and 1952, Congress spent more than $11 billion on flood control projects, including the levees that lined the Mississippi from the mouth of the Missouri to the mouth of the Ohio.[13]

In 1945, the Corps of Engineers surveyed the American Bottom for the placement of levees, designed them to hold flood levels of up to 47 feet, and began construction on them. The Flood of 1947 intervened and swamped parts of the floodplain. The Corps completed the levees over the next two years at a cost of $8 per acre.[14]

At the same time the Corps constructed the levees along the Mississippi, the engineers also levied the creeks that flow out of the upland—Carr Creek, Fountain Creek, and Prairie du Rocher Creek—to keep them from flooding the bottoms. They built them to the same height, 47 feet, as the riverfront levees. In addition, the Corps straightened, shortened, and diverted Fountain Creek to the river, leaving old Fountain Creek to act as a drainage ditch as it meandered to a new pumping station at the levee. Here, water in the vestigial creek is pumped through a concrete culvert and lock and into the river. When the river is flooded the lock is closed to prevent the river from backing up into the ditch. Finally, the Corps funneled Carr Creek and Prairie du Rocher Creek through locks and directly to the river and built a pumping station, but no levee, along Maeystown Creek, which runs south out of Monroe County into Randolph County.

Fountain Creek and Levee, April 1993

Moredock Lake from Salt Lick Point

The effect of all this ditch-digging, levee-building, and stream-diversion was to reduce the quantity and quality of wetlands on the American Bottom in the nineteenth and twentieth centuries.

In 1800, a few years after Americans arrived following the Revolutionary War, forests covered 45 percent of the landscape, prairies 29 percent, and water and lakes 14 percent. Of the prairie that existed in the bottoms in 1800, 94 percent has been turned over to agriculture. None has been restored. In 1800, the Americans who settled the bottoms found 34,440 acres of wetlands and marsh. By 1989, that had been reduced to 780 acres. Bottomland forests had shrunk by 95,746 acres by 1989. Of the forests, those in the batture lands on the riverfront survived the best, with 40 percent of the 53,755 acres found in 1800 remaining 200 years later.

In 1898, the Moredock Lake Fishing and Hunting Club relocated to the Castor River in southeastern Missouri, where the hunting and fishing would be better. The efforts of the drainage district that surround Moredock Lake had destroyed the lake as a prime fishing and hunting preserve. A new club leased the lake and sought permission from the surrounding farmers to dam the outlet of the lake and return it to its status as one of the best fishing resorts in the state.[15]

The first recorded account of flooding in the American Bottom had the citizens of Kaskaskia fleeing to the bluffs in 1724. The flood destroyed their cornfields and gardens and damaged their dwellings and farm buildings.[16]

In April 1785, "*l'année des grandes eaux*," the Mississippi flooded from valley wall to valley wall, reaching a level of 41.4 feet on the St. Louis gauge. The flood filled the lakes and sloughs. Auguste Chouteau took a boat from St. Louis and traveled through the forests in the American Bottom to Kaskaskia.

In 1844, once again the Mississippi inundated the American Bottom clear to the bluffs. At St. Louis the flood rose to 49.97 feet on the gauge. Fast forward to the 1940s and 1950s when the Corps of Engineers designed the levee at East St. Louis and the floodwalls at St. Louis to withstand a 500-year flood, the engineers using 49.97 feet plus two feet to determine its height—52 feet.[17]

In the years after the *Zebulon Pike* arrived in St. Louis in 1817, steamboats stripped the bank of the Mississippi of trees to feed to their boilers and stripped away the protection against erosion that the trees offered. By the winter of 1881, "The Narrows"—that shrinking strip of land between the Mississippi and Kaskaskia rivers—was no more than 400 feet wide north of the Village of Kaskaskia; the slope across "The Narrows" was a steep seven- or eight-foot drop.

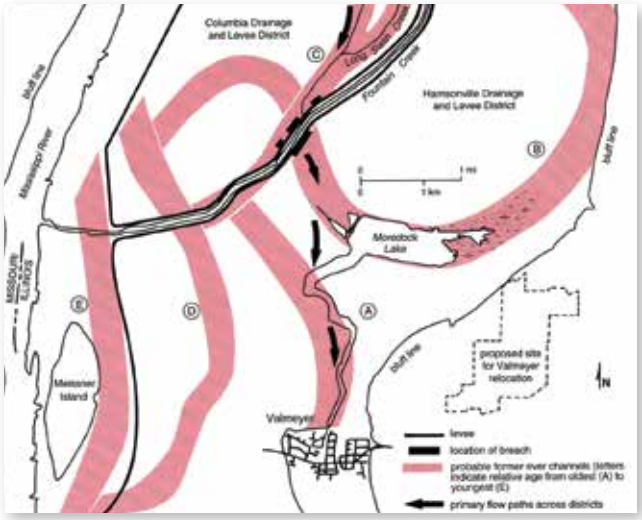
Kaskaskia Island, October 1993

That winter heavy snow blanketed the northern reaches of the Mississippi basin; ice clogged the river between St. Louis and Cairo and undermined the Corps of Engineers' efforts to protect "The Narrows" from erosion. On April 18 the Mississippi jumped its bank, picked up a shallow ditch in "The Narrows," flowed to the Kaskaskia, and took over its narrow channel.

It took several years for the Mississippi to completely capture the Kaskaskia and destroy the village, leaving the peninsula on which the village stood on the Missouri side of the river. In 1913, the farmers on Kaskaskia Island formed a drainage district and built levees. On July 22, 1993, the Mississippi breached the 52-foot levee on Kaskaskia Island, once again flooding the peninsula.[18]

The Mississippi has flowed in several distinct channels across the American Bottom south of Alton. At first, and for a very short time, the river followed channel A, a braided pattern as it spread loads of sediment from the upper valley across its floodplain. Then, starting 9,500 years ago and continuing for 6,000 years, the Mississippi looped across the American Bottom in large meanders, channel B. Then its regime changed to a smaller, straighter meander 3,500 years ago, channels C and D. Then, 1,100 years ago, the Mississippi took up its modern meander belt, channel E, a side channel of the river.

On the right is an Illinois Geological Survey map of the old channels in the American Bottom. Channel A, the



Old Mississippi channels[19]

extension of Moredock Lake that runs into old Valmeyer is the oldest; then B, Moredock Lake; then C, Long Slash Creek; then D, the old channel of Fountain Creek; then E, Lewis Slough in the Meissner Island Division of the Middle Mississippi NWR on the river side of the levee.

At least two were factors in the flood of 1993.

The Flood of 1993: Fountain Creek and its levees, August 9, 1993

To understand the 1993 flood on the American Bottom, first you must understand the low-water reference point. It's an arbitrary number used to set gauges at various stations along the Mississippi at zero. In St. Louis it is set at the foot of Market Street, river mile 179.6. Floods are measured from there. From the low reference point the river drops a half-foot per mile, the slope of the low water reference plane.[20]

Then you need to understand the levees: the St. Louis floodwalls and East St. Louis levees, upstream of the American bottom, are protected by 500-year floodwalls and levees. They are designed to accommodate a 52-foot flood on the St. Louis gauge—that is, 52 feet above the low water reference plane. The three sections of the levee that enclose the Columbia Drainage and Levee District are 100-year levees, ones that will accommodate a 47-foot flood on the St. Louis gauge. The Mississippi crested at 49.6 feet at St. Louis on August 1, 1993, and flowed south to the American Bottom.

For days everyone, Monroe County residents and personnel from the Corps of Engineers, watched the Columbia levee for signs that it was weakening. They watched for low spots in the levee, soft spots in the levee, and sand boils, erupting on the inside as the flood seeped under the levee. To raise the levees several feet, Monroe County residents set rock on the crown of the levee. To provide resistance to the fast rising river and overtopping, workers draped the rock with plastic sheets and ran it down the riverside of the levee.

On July 31 water flowed under rock and eroded bits of it away; the toe of the levee got very soft; finally, water spilled over the top. At 8:30 on the morning of August 1, the river breached the levee, scoured a hole 95 feet deep, crumpled and washed away Virgil Gummersheimer's house, spread a fan of sand a mile and a half long down the floodplain, and surged toward Fountain Creek.[21]

If you drive Bluff Road, it will carry you past Moredock Lake and onto the Fountain Creek Levee, part of the *C*-shaped levee that enclosed the Columbia Drainage and Levee District. The levee starts at the point where Carr Creek exits the bluffs, runs south along the Mississippi, and turns northwest to the point where Fountain Creek exits the bluffs. Think of the area inside the levee as a bowl, because that is what it became on August 1, 1993, when the Mississippi breached the northern section of the levee along the Mississippi and tore south toward Fountain Creek.

The floodplain slopes south. So does the levee. So does the river. All are measured against the low water reference plane. The Fountain Creek levee was the same height above the plane as the levee at the break to the north, but it sat lower on the floodplain. Floodwater filled the bowl to the level of the river at the break, higher than the Fountain Creek levee.

Moredock Lake—October 1993

The Fountain Creek levee was built over the channel of Long Slash Creek, a tributary to Fountain Creek, and over the ancient channel of Moredock Lake, the old channel of the river that once ran along the bluff. Months of rain saturated the sand in the ancient channels, compromising the foundation of the levee, which sagged even lower.

The Mississippi had long since backed up into Fountain Creek, leaving little room for the surge of water flowing through the break. Debris—hay bales, sides of barns, outhouses, uprooted trees—plugged Fountain Creek under the bridge south of Fountain, Illinois. Nevertheless, Fountain Creek did do its job and returned some the surge to the river. Not enough. The remainder breached the Harrisonville levee on the south side of the creek and scoured a triangular hole 800 feet wide and 25 feet deep, but tapering to nothing where the levee was still intact. The flood flowed south, picking up the ancient channel that runs through Moredock Lake, straight through the heart of the Village of Valmeyer. It continued south through Fults to Prairie du Rocher, where the Fort du Chartres levee along the river was tall enough to contain the flood on the outside, but the levee along Prairie du Rocher Creek was not tall enough to contain the flood on the inside.[22]

Fort de Chartres Lock at the end of Onemile Race Creek

Because the river slopes south, and because the flood at Fort de Chartres was higher in the bottoms than in the river itself, the Corps of Engineers hoped they could open the locks in the culverts that ran through the Fort de Chartres and Ivy Landing District's riverfront levee. Doing so would intentionally flood the southern end of the district to cushion the surge coming down from Fountain Creek. Such an idea had never been tried before. Only two of the three locks opened, which was not enough.

The levee commissioners asked the Corps to break through the riverfront levee. The Corps hired Luhr Brothers, a river engineering firm headquartered in Columbia, Illinois, to bring in a barge-mounted shovel to excavate a hole in the levee, five feet deep and 400 feet across. Then, the commissioners of the Fort Chartres District, acting against the advice of the Corps, blasted more holes in the levee to release more water from the bottoms. Luhr Brothers returned and enlarged the hole to 1000 feet across and ten feet deep, approximately equal to the size of the breach at Fountain Creek. The water flowed in from the river and provided the needed cushion to slow down the surge. As the flood level rose inside the district, it became deep enough to flow out through the intentional break in the levee.[23]

Prairie du Rocher translates into English as Prairie of the Rock. In 1722, the French built the village in the shadow of the bluffs on the terrace of colluvium, washed down from the loess-covered hills. Prairie du Rocher Creek flows out of the uplands and sweeps in a semicircle to the north and west of the village, which lies between the creek and the bluff.

As the 1993 flood cascaded south the villagers feared the same would happen to their creek as had happened at Fountain Creek. The northern levee would break, the southern levee would break, and the village would flood. The villagers put out a call on radio and television for sandbaggers, who came from as far away as St. Louis to form a human chain to add a foot and a half to the northern levee. The flood did overtop the levee in a few places, but the sandbags and the levee held. Acting together, the Corps of Engineers and its contractor, the villagers, and the sandbaggers saved the town.

Prairie du Rocher

A corn field covered in sand washed in by the flood, May 1994

When the 1993 flood breached the Columbia district levee just south of Carr Creek at the very northern edge of the district, it scoured a 95-foot deep hole at the breach, almost to bedrock. It spread out to the north and east, then flowed south and deposited a fan of coarse and fine sand that covered the fields for a mile and a half south of the break. Some of the sand came from the river, some came from the levee itself, but most of it came from the sand-rich deposits of the Cahokia and Henry Formations in the scour hole.

The sand fan covered 760 acres to a maximum thickness of eight feet in one small point and a minimum thickness of six inches. About three-quarters of a mile from the break, where the sand was about six inches deep, the force of the flood bent corn stalks and stripped them of their leaves and young ears.

In the wake of the flood, American Bottom farmers cleared the sand from their fields and returned it to the scour hole from which it came.[24]

Corn, Stringtown—Janauary 1994

On September 3, a month after the Columbia Levee broke, the Monroe County Commissioners issued a press release detailing the impact of the flood on the residents of the floodplain: 47,000 acres inundated; 650 houses flooded—350 in Valmeyer, 50 in Fults, and 250 farm houses; 2,600 people were displaced. No one died.

The economic losses came to $130 million: $5 million in assessed value, $93 million in land, $15 million in residential buildings, $5 million in farm buildings, $2 million in commercial buildings, $5 million in public buildings, and $5 million in infrastructure.[25]

Mueller's Cypress—May 1994

Flood waters spread sand across the landscape, cut gullies in the fields, filled the drainage ditches with sediment, bits and pieces of houses, corn stalks, and other debris. Before the end of August, farmers understood that clean up would not come in time to plant winter wheat in September. And they were concerned that the levees would not be repaired in time to plant the corn and soybeans in the spring.

In 1963, American Bottom farmer Herbert Mueller planted a cypress grove in a low place on his farm. The cypress thrived, possibly because Mueller planted them right up against a railroad embankment that made drainage to Long Slash Creek to the south difficult. The flood did not completely drain away from the bottoms until the river fell below flood stage several months later. The following May his fields were still very wet and moist soil plants were growing at the edges.[26]

At one hundred acres, reduced from five hundred, Moredock Lake, the remnant of an ancient channel of the Mississippi, is still beloved by duck hunters, birders, and anglers. The Flood of 1993 washed rough fish into the lake like Silver carp—that air-born fish that can knock an angler senseless. Gar, drum, buffalo, and suckerfish also replaced the bass, crappie, and bluegill that anglers prize.

The Village of Valmeyer hired professional anglers to cull rough fish from the lake. They put in large-mesh nets that capture the big fish and let the smaller valuable fish pass through. The work is done in the winter. Once the rough fish were culled from the lake, the village restocked the lake with valuable fish.

Birders have tracked Cattle Egrets from their roosts in Kidd Lake to Moredock Lake. Others have spotted flocks of Pelicans and Snow Geese stopping by on their fall migration. White Ibis, birds normally found along the Atlantic and Gulf coasts, have been seen at Moredock. Avocets, which normally stalk salt and brackish marshes, have stumbled upon Moredock. Forster's Terns and Black Terns have also been found at the lake.

Moredock Lake

The Stringtown-Fort de Chartres and Ivy Landing Levee and Drainage District—June 2011

At one time the Mississippi looped across the Stringtown-Fort de Chartres and Ivy Landing Levee and Drainage District in large meanders, similar to the Moredock Lake meander. When the river changed its regime, it left behind large bottomland lakes. Kidd Lake is the remnant of one; the Chartres Waterfowl Club is another.

Drive north along the road at the crown of the riverfront levee. First you will see the big culvert and its three locks, the ones that opened so stubbornly during the Flood of 1993. It is connected to the big Onemile Race Creek Drain. Further up the road you will pass five small culverts, each with one lock, each connected to a smaller drain. In spite of the levee district's efforts to drain the floodplain for agriculture, internal flooding is a problem when the Mississippi is in full flood and the locks in the several culverts, where the drains meet the riverfront levee, are closed. Water in the drains and creeks spills over onto the fields because there is no pump at the main set of locks.

Before European settlement, Fults Creek, now channelized in two directions to speed floodwater off agricultural land, flowed out of the uplands and refreshed Kidd Lake Marsh. The Fort Chartres and Ivy Landing Drainage and Levee District diverted the creek to the Onemile Race Creek ditch and cut off the flow of water to the marsh. Farmers purchased bits and pieces of Kidd Lake, drained it, and converted it to cropland, which is why when you see it from Fults Hill Prairie, it is broken into squares.

Fults Creek Diversion Ditch

At the end of the twentieth century, the state of Illinois and individual landowners had begun restoring wetlands and forests. By 2000, 7,715 acres of wetlands and 10,025 acres of forest had been restored, much of it in the hard-to-drain Fort Chartres and Ivy Landing Levee District.[27]

Kidd Lake Marsh State Natural Area

Like Moredock Lake, Kidd Lake is an abandoned channel of the Mississippi that evolved into a bottomland lake. Before European settlement, it hosted a floodplain forest and a slope forest on colluvium between the lake and the bluffs.

In 1970, the State of Illinois purchased 226 acres of the original lake, added 218 acres to its holdings in 1988, and created the Kidd Lake Marsh Natural Area. In 1997, a private duck club purchased 200 acres to the west of the natural area. The state and the duck club began restoring 650 acres of the original lake, building low containment levees and pumping in well water to keep it wet. In May 2011, Southwestern Illinois Resource Conservation and Development donated 94.5 acres to the Illinois Department of Natural Resources to be added to Kidd Lake. The funding for the purchase of the land came from the Illinois

Kidd Lake Marsh State Natural Area

Clean Energy Community Foundation, the Vital Lands Illinois Program within the Grand Victoria Foundation, and The Nature Conservancy.

In April 2010, the Rock Island District of the Corps of Engineers made a list of high priority ecosystem restoration projects for the Middle Mississippi, which extends from the Missouri River to the Ohio. While the engineers' primary focus was on islands and side channels in the river, they also looked at the possibility of incorporating Kidd Lake into a diverse complex that would include Fort Chartres Island and Chute along the river.[28]

In the spring Kidd Lake is a cacophony of frog calls, males looking for mates: chorus frogs sing, southern leopard frogs cackle, northern spring peepers peep, American toads trill, and bullfrogs go "glu-ub, glu-ub."

Kidd Lake marsh was once home to a variety of wetland birds, some now rare in Illinois. It is an important rest stop for migrating waterfowl and continues to provide critical habitat to amphibians, reptiles, and a diverse range of birds—so diverse that the American Waterfowl Management Plan considers Kidd Lake one of the most important Illinois wetlands for breeding species.

In early spring a profusion of duckweed (*Lemnoideae species*), each no larger than a baby's pinky fingernail, starts to dot the surface of the lake. Startled American Coots run across the water before taking off. By summer wading birds—Great Blue Herons, Little Blue Herons, Great Egrets, and shy Sora—pick through the young cattails (*Typha species*), lotus (*Nelumbo nucifere*), smartweeds (*Polygonum pensuylvanicum*), cordgrass (*Spartina pectinata*), river bulrush (*Scirpus fluviatilis*), false aster (*Boltonia asteroids recognita*), and arrowleaf (*Polygonium sagittatum*).

They all hang around through the fall, when Canada Geese, Snow Geese, Blue-Winged Teals, Mallards, Wood Ducks, and Gadwalls descend on their fall migrations. The Great Blues and the Coots can be found during a mild winter, when the Bald Eagles arrive and muskrats build their dome-shaped houses from summer's cattails, lotus, and bulrush.

The Chartres Waterfowl Club is a private duck hunting

Fort Chartres Duck Club

area, one of several on the American Bottom. Charlie Frederick, a one-man conservation organization, swears ducks would fly over looking for the natural wetlands that once dotted the landscape before he created duck ponds out of farmland.

Like at Kidd Lake Natural Area, Great and Snowy Egrets wade his ponds. So do Great Blue Herons. Pelicans drop by on their spring and fall migrations.

The club is reserved for ducks and duck hunters between Thanksgiving and January 20. Frederick welcomes others to the club anytime between January 20 and Thanksgiving.

Frederick practices moist soil management at Chartres Waterfowl. He built levees to create duck ponds out of cornfields, where he manipulates the water levels, drawing down the levels in the summer and allowing moist soil plants to grow, food for migrating ducks, recreation for duck hunters. Finally, he is restoring a bottomland forest, where he has planted pin oak and other hardwoods in fields adjacent to the duck ponds.

In the late eighteenth century, Jean Baptiste Barbeau built his house on the bank of Barbeau Creek and under the shadow of the Modoc Rock Shelter. Barbeau Creek flowed out of the uplands, emptied into Marais Geauteau—a lake—and then through The Discharge, which spread out into the swales in the floodplain. Before the Corps of Engineers channelized Prairie du Rocher Creek between levees, it, too, flowed to the river through The Discharge.

Even after more than a century of drainage projects on the American Bottom, Barbeau Creek flows to The Discharge, which carries the creek through a culvert in the levee. No lock in the culvert under the levee prevents the Mississippi from backing up and filling The Discharge with water come floodtime.

Once through the levee, Barbeau Creek waters a bottomland forest in the batture lands before emptying into the Mississippi. Most of the forests on the American Bottom are limited to the batture lands between the levee and the river. They are treed in cottonwood (*Populus deltoids*), sycamore (*Platanus occidentalis*), hackberry (*Celtis occidentalis*), sweet gum (*Liquidambar styraciflua*), swamp oak (*Quercus bicolor*), white walnut (*Juglans cinerea*), black walnut (*Juglans nigra*), pecan (*Carya illinoinensis*), and sugar maple (*Acer saccharum*). There are, however, patches of forest scattered throughout the bottoms inside the levees, mostly in places, like Herbert Mueller's cypress grove, that are hard to drain and along the ridges that define the edges of the swales in The Discharge.[29]

Barbeau Creek Runs through The Discharge Coulie

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Anatomy, Grave-Robbing, and Spiritualism in Antebellum St. Louis

BY LUKE RITTER

With the professionalization of medicine and medical training in the late eighteenth and early nineteenth centuries came new forms of research and teaching, including human dissection. One occupation that emerged in response to a growing demand for cadavers was that of graverobbing. *(Image: Library of Congress)*

When Mrs. Malter went missing on the eleventh of September in 1849, her family suspected Dr. Joseph Nash McDowell, head of the Missouri Medical College. She was last seen at seven o'clock in the evening, walking her dog along Chouteau Avenue in south St. Louis. The mysterious disappearance of Mrs. Malter, a German immigrant married to a respected German American businessman, headlined the local newspapers. In the excitement surrounding her disappearance, one witness told reporters he thought he saw Mrs. Malter's handkerchief, "or some other article" of hers, near McDowell's medical college. The Missouri Medical College was then located at Eighth and Gratiot streets, just one block away from Mrs. Malter's last known location. According to one local newspaper, the rumors about the handkerchief and McDowell's implication in her disappearance "excited in the minds of many Germans a suspicion that she [had] been *burked*, seized, and taken for dissection." St. Louisans suspected Dr. McDowell and his students of robbing the city's graveyards for cadavers, and for good reason, but this accusation was murder. By Friday morning, September 14, hundreds of Germans in the city's south side were convinced someone had seen a whole "bundle (of clothing)" in front of the college. Mr. Malter demanded satisfaction, and at noon "two to four hundred persons collected in the vicinity of the College." Dr. McDowell

Dr. William Beaumont was professor of surgery when this photo of the medical school at St. Louis University was taken, and something of a competitor to McDowell. Beaumont had his own unconventional method of studying anatomy. Beaumont treated Alexis St. Martin for a severe wound to the abdomen in 1822, but didn't expect him to survive; St. Martin lived, but had a fistula in his stomach the rest of his life, through which Beaumont could study the process of digestion, earning him the reputation as the "Father of Gastric Physiology." *(Image: St. Louis University Libraries Special Collections)*

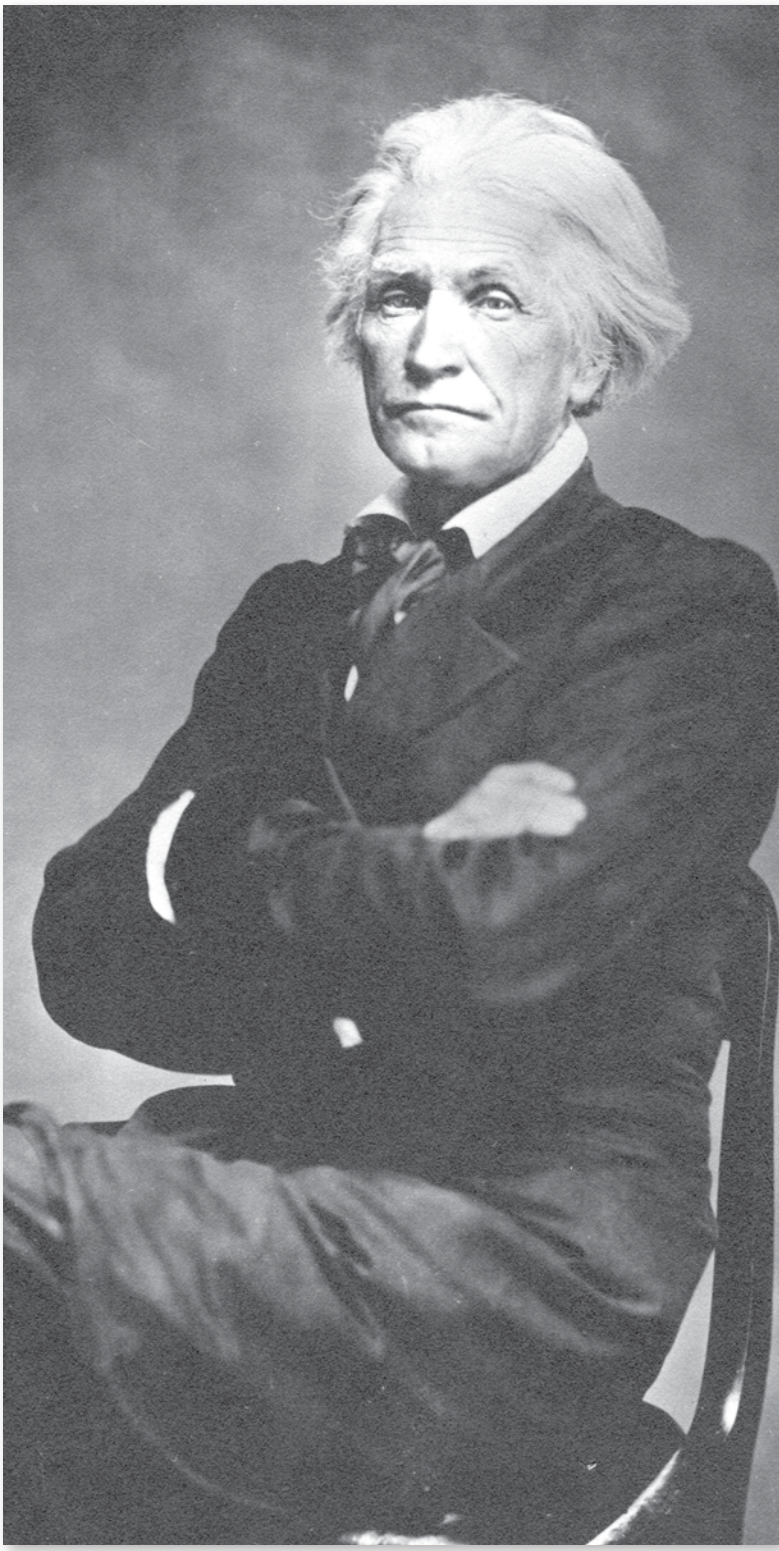
and his medical students prepared for battle as they heard the crowd's "howling and cursing" approach the school.[1]

McDowell's colleagues and students later sketched anecdotes of McDowell's token "eccentricities" during the disturbance. The inflamed doctor vowed before his students that he would never permit diplomacy with any German. He told his colleague John B. Johnson that he intended to "blow up every Dutchman out there" who attempted to enter his college. He mounted three cannons in the upper room of the school and gathered "old flint-lock muskets" from his private arsenal, which he had acquired in his home state of Kentucky in 1846, explained McDowell's student John Snyder, for a "hairbrained filibustering expedition to assist the Texans in maintaining their independence." The filibuster never came to pass, but McDowell kept three cannons and 1,400 muskets. The doctor and thirty armed students manned the bastion.

Once the club- and axe-wielding German mob came into view, McDowell struck a valiant pose, "looking just like the pictures of General [Andrew] Jackson," his favorite hero, and "stood valiantly by his guns with a fuse in one hand and some loco-foco matches in the other."[2] Before McDowell could light the fuse on his cannon, the police arrived and demanded the mob disperse on the condition that Mr. Malter could search the premises. The doctor "pretended to be furious" that the city's authorities had disrupted "such a splendid opportunity to wipe his enemies off the face of the earth." His students found this humorous because they knew "he had gone to the city hall the evening before to beg for this very protection."[3] Fortunately for McDowell, the mob dispersed. Two months later Mrs. Malter was discovered in Alton, Missouri, with a "handsomer man." Those who found her thought she seemed mentally unstable.[4]

Colorful stories like this one pervaded the recollections of Dr. McDowell's acquaintances. They noted his alcoholism (one time he gave a speech on temperance while swigging from a flask of brandy), his obsession with Andrew Jackson, his paranoia of Jesuits and St. Louis University, and his abrasive bedside manner. At night, he exhumed dead bodies from the city's graveyards for dissection and nearly was caught red-handed, too. Though the doctor had not bashed Mrs. Malter in the head and taken her into his college for dissection, as it was rumored, he did narrowly avoid arrest that same year by hiding the stolen corpse of a young German girl just minutes before a posse raided the school.[5]

Despite his controversial antics, McDowell held a prestigious position in one of the preeminent medical colleges in the West for 20 years. In fact, his medical school was the first established west of the Mississippi River, in 1840, and it constituted the foundation of Washington University. He contributed in a major way to a generation of doctors that his oldest surviving student John Snyder warmly referred to in 1914 as the "McDowell Era." Dr. McDowell represented a new empirical paradigm in medical science based on anatomy, and his college epitomized the cutting edge of medical education in the West.[6] But when he was not treating patients in the city



Joseph Nash McDowell (d. 1868) imagined "himself a second Jackson," wrote student John F. Snyder, a personal hero whom "he almost worshipped." He even bore a striking resemblance to the former president: "tall, erect and slender, with long, sharp face, gray eyes and sandy hair." *(Image: Washington University School of Medicine)*

hospital, teaching students about human anatomy in the lecture hall, resurrecting corpses at night, or irritating Germans, the doctor spent his private time studying ghosts and other preternatural mysteries. He promoted empirically driven anatomical science yet entertained an alternative spiritualist fascination with death, dissection, and the life beyond. In the mid-nineteenth century, the new anatomical science based on human dissection emerged alongside old folk practices and worldviews. Dr. McDowell exploited the situation and flourished as an anatomist, healer, resurrectionist, and spiritualist.[7]

Once the generation of doctors that knew McDowell passed, his memory survived in local ghost folklore. During the Civil War, McDowell served as the Surgeon General for the Confederate Army of the West. In his absence, the Union army remodeled his college into a prison for Confederate prisoners-of-war.[8] Reports that Union soldiers cleared three carts of animal and human bones from the basement of the school during the prison renovation led the superstitious to believe that disturbed spirits of dissected bodies haunted McDowell's college. One man reported in 1880 that he "had heard of a phantom that haunted McDowell's old college." He investigated this particular instance and found two boys meddling nearby with white sheets and "other concomitants of fictitious phenomena of this character." Nevertheless, it remained customary for St. Louisans to cross themselves when they walked past the college. While the Missouri Medical College continued at a different location, McDowell's old school remained vacant until the Terminal Railroad Association leveled it to make way for tracks in 1882.[9]

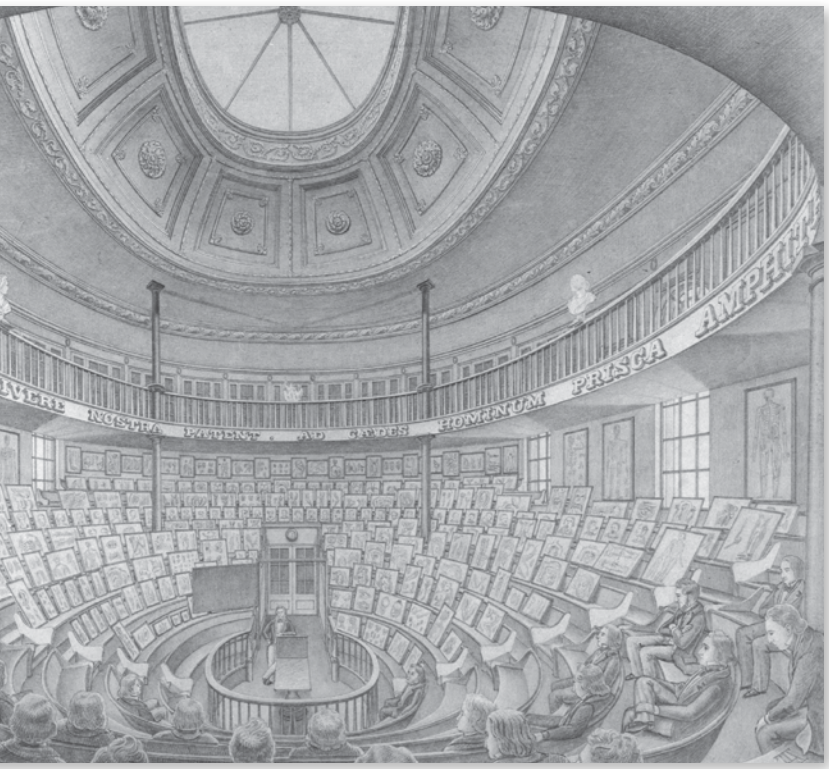
Though largely forgotten today, the eccentric doctor was "one of the most conspicuous and best known men in St. Louis."[10] He came from a famous family of doctors in Kentucky. His uncle Ephraim McDowell performed the first ovariotomy in the United States on December 13, 1809. Joseph McDowell received his MD under the erudite Dr. Daniel Drake from Transylvania University, Kentucky, and married Drake's daughter.[11]

McDowell gained wide acclaim in an entrepreneurial network of young doctors whose startup medical programs differed from European state-run schools because they were more tightly organized around the personalities of individual professors.[12] His professional reputation as an esteemed faculty member at medical departments in Kentucky, Philadelphia, and Ohio preceded him when he arrived in St. Louis in 1839.[13] Despite an immediate falling-out with the city's leading doctor, William Beaumont, and the Medical Society of Missouri, he received enough financial support to found Missouri's first medical school in 1840. After a seven-year stay at Kemper College, the doctor began construction on the Missouri Medical College in 1847 at Eighth and Gratiot streets.[14]

McDowell's college epitomized the emergent professionalization of medical education. The *Sunday Morning Republican* of St. Louis pronounced Missouri Medical College "the pride of our city." Medical schools like McDowell's, the article continued, "are living examples of the growth and progressive spirit of the West, and of our city." President Zachary Taylor appointed McDowell head physician and surgeon of the city's largest hospital in 1849.[15] McDowell bragged six years later, "Our City Hospital is finished and *we* have such advantages as place us in the position to make a *jump* over Hospitals, the best in the great valley." McDowell's students attributed the doctor's "Strenuous cultivation of our Science" to the Missouri Medical College's status as "the leading school of the West."[16]

McDowell successfully carved a class of new medical professionals out of an old folk culture that deferred to the experience of local healers.[17] This was no easy task because "the American public was very skeptical of doctors," explained one historian, and many consulted "sectarian practitioners rather than physicians for their medical needs." The skills and techniques taught in American medical schools, which numbered 26 in 1840, "were hopelessly inadequate."[18] Insufficient medical knowledge and immature professional standards caused many Americans to fear university-trained surgeons, evidenced by the adage, "doctors are as likely to kill you

Photograph of McDowell's Missouri Medical College, completed in 1849. The impressive octagonal, thick-walled, three-story building included the largest anatomical amphitheater and museum in the Mississippi Valley, a medical library, and several dissecting rooms. Currently, the Purina complex stands at the prior location of McDowell's college at Eighth and Gratiot streets. *(Image: Washington University School of Medicine)*

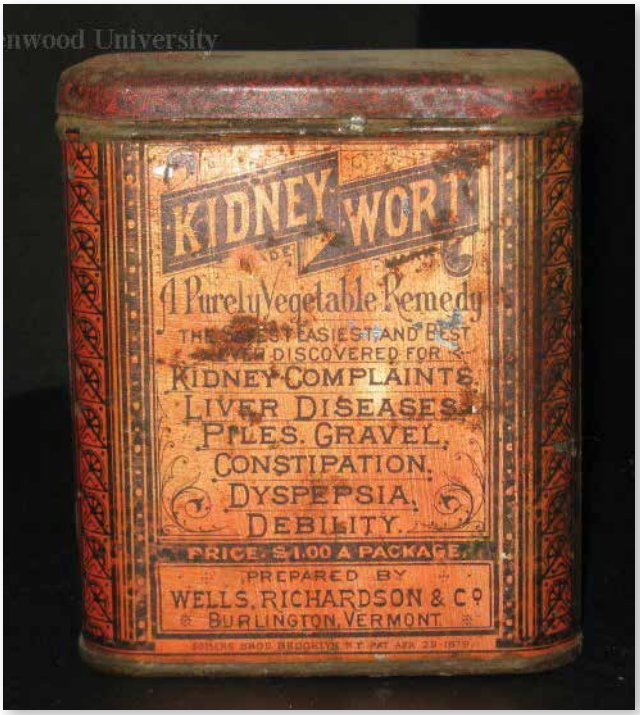


A gallery like this one was standard at medical schools for demonstrations. *(Image: Washington University School of Medicine)*

as cure you." Through much of the nineteenth century, Americans preferred local practitioners with little to no medical education. In 1845, one St. Louis journal counted 146 practitioners when the city's population was around 40,000, of which "probably ninety or one hundred hold diplomas." That left a third who had little or no formal medical training. One doctor in St. Louis thought "there are too many physicians." The "old men," thought this university-trained doctor, were "extremely ignorant," though, they had "the confidence of families, and cannot be ousted by younger ones."[19]

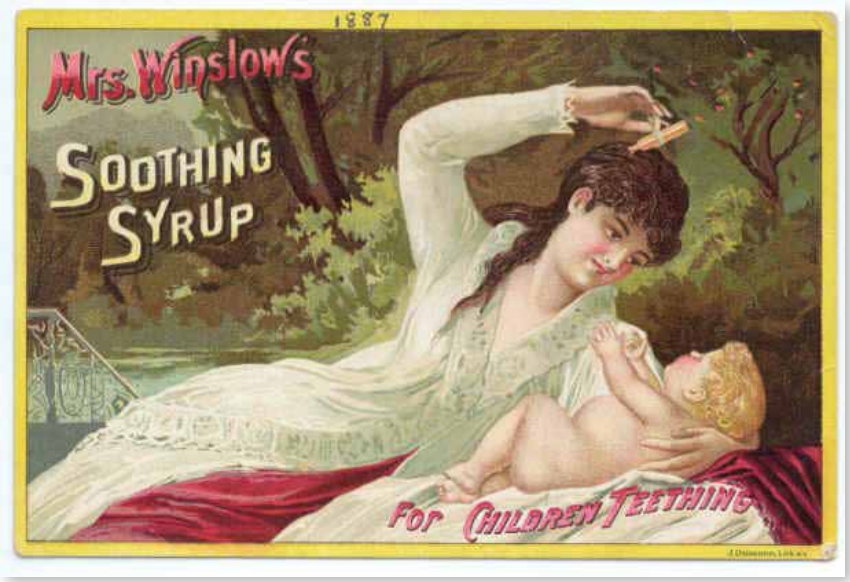
Dr. McDowell thought the old men lowered the overall reputation of the medical profession and made it harder for him to legitimate his cause. He told one story about an "old doctor" who mixed tobacco spit into his homemade pills. When McDowell asked him about it, the old doctor replied: "Oh, I am just making some pills for a lady across the street, and as there isn't any water handy, I just do this way." While traveling in Missouri in 1854, Drake, McDowell's first-born son and also a doctor, could only find one town along the entire Missouri River "which is not rammed full of pill venders." The relative quackery of pill vendors represented outdated medicine for McDowell, his son, and other doctors attempting to distinguish themselves as professionals. These new professionalized doctors wanted medicine based on human dissection to replace pills made from spittle.[20]

McDowell differentiated his lot from "those 'cure-all' fellows" on the premise that anatomical medicine represented *true* science. In this way, he was a progressive. Several studies on antebellum medicine in America correctly point out that anatomy played a crucial role in the formation of modern science. One historian connects the rise of anatomy to a transformation of medical identity from "trade" to "craft," art to science.[21] Before anatomical medicine became standard practice after the Civil War, many physicians practiced "therapeutics," which primarily regulated bodily secretions to deliver a person from a state of disequilibrium, or illness, to equilibrium, health. Physicians in the early nineteenth century tended to focus



Patent medicines like this one were widely available in the nineteenth century. Despite efforts to professionalize medicine, people continued to take "cure-alls" with herbal foundations, dubious ingredients, or alcohol and addictive drugs. This kidneywort, for example, was used for liver ailments. Wells, Richardson, and Company in Burlington, Vermont, made a whole line of such products before passage of the Pure Food and Drug Act in 1906. *(Image: Lindenwood University Wetterau Collection)*

on drugs that "worked," in that they produced immediate and visible "alterative" effects. For example, during the cholera epidemic of 1849, doctors prescribed drugs that induced constipation to regulate the symptomatic diarrhea and vomiting of patients infected with cholera. Anatomical medicine promised more precise diagnoses and corrective surgeries; but prescriptions based on anatomical discoveries did not offer immediate remedies, and surgeries often resulted in death. Doctors and laymen alike



Patent medicines like Athlophoros were widely marketed without a shred of scientific evidence that they worked. Some patent medicines were outright harmful. Mrs. Winslow's Soothing Syrup, first on the market in 1849, was a morphine-based syrup to quiet infants. As medicine became more professional, the medical community increasingly decried products like Mrs. Winslow's. The American Medical Association listed it among its "baby killers" in 1911; incredibly, it was still available in England until 1930. *(Images: opiods.com; Lindenwood University Wetterau Collection)*

noticed the inconsistencies between anatomical science in institutional settings and clinical practice in homes.[22]

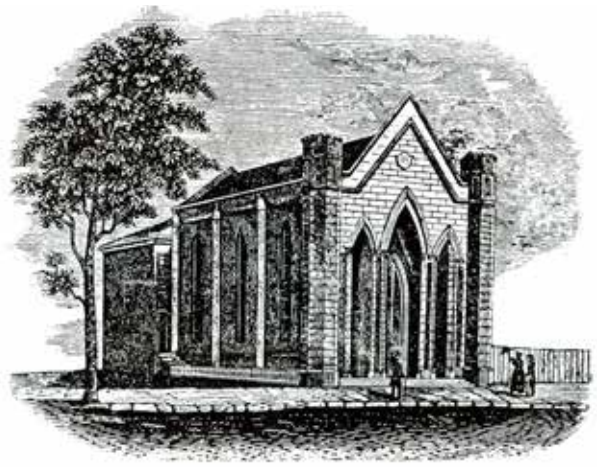
McDowell straddled the proverbial fence separating anatomical and therapeutic science and institutional and folk medicine. In this sense, he was both artist and scientist. During the cholera epidemic of 1849, which claimed the lives of 4,557 St. Louis residents in a single year, McDowell promised that if anyone applied his therapeutically-based cholera prescription, the disease was "sure to be subdued." Unfortunately, he was wrong because therapeutic methods seeking equilibrium emphasized dehydration instead of the real antidote to cholera: water. McDowell's cholera prescription included one chief ingredient, opium, and measurements of various spices such as "African pepper," a relative of black pepper. His prescription came with precise instructions about what to do if the opium-pepper pills proved ineffective: "If vomiting continues, at intervals blister the stomach and back…The discharges from the bowels must be checked, and stopped at once, to do this give injections [of sugar and laudanum]…To *quench the thirst* give a tea spoon full of powdered ice occasionally." Opium and laudanum, a preparation made of alcohol, herbs, and powdered opium, dehydrated patients. Desperate for water, cholera victims on McDowell's treatment were only allowed "a tea spoon full of powdered ice." McDowell's therapeutic prescription was actually quite popular despite its seemingly apparent ineffectiveness. As St. Louisan Flora Caldwell remarked, Dr. McDowell "was one of the most successful Physicians during the time of the Cholera."[23]

McDowell was frequently the last stranger called to the

The three Fox sisters—Leah (1814-1890), Margaret (1833-1893), and Kate (1837-1892)—were part of the rise of spiritualism in the mid-late nineteenth century, holding that the spirits of the dead could be contacted. Their séances were famous starting in 1850. Margaret and Kate revealed the methods of their hoax in 1888 when a reporter offered them $1,500 to do so; Margaret recanted her confession a year later, but both died in poverty. *(Image: Emma Hardinge Britten, Nineteenth Century Miracles: Spirits and Their Work in Every Country of the Earth, 1884)*

bedside of the dying. He administered the penultimate injections, pills, and second-degree burn treatments before his patients passed from life to death. Then, he summoned the dead to his dissecting room. Dr. McDowell possessed a new relationship with the dead by which corpses transformed into anatomical specimens in his laboratory and provided him with empirical knowledge of the human body. What was even more uncommon than his professionalized role as dissector was the illicit way he obtained fresh cadavers: McDowell required his students to dig up dead bodies from the city graveyards under the cover of night and to perform at least one human dissection before their graduation. It was all part of their education.[24]

McDowell and his students resurrected corpses at a time when human dissection was illegal. Though medical education in nineteenth-century America progressed at relatively the same rate as in Europe, Americans were especially slow to pass laws that permitted the dissection of deceased persons other than executed criminals. Frequent grave-robbing in Britain resulted in the Warburton Anatomy Act of 1832, which legalized the state-managed sale of unclaimed dead bodies — usually paupers and vagrants — to medical schools. In France, claimants to the body of any patient who died in a state hospital had only 24 hours before medical schools could collect the deceased from the state. In the United States, only five states passed anatomy laws that allowed the dissection of non-felons before the Civil War, three of which were summarily repealed. Only the Massachusetts anatomy law of 1831 and New York "Bone Bill" of 1854 survived. Desperately short on anatomical specimens, doctors resorted to their own illegal devices. Amazingly, before New York passed the "Bone Bill" in 1854, reports estimated that grave-robbers snatched six to seven hundred bodies from New York City's graveyards annually. This



The medical school at St. Louis University at Washington and 9th streets, pictured here from 1842, was the site of an anatomy riot in 1844, when people saw discarded remains behind the school. *(Image: St. Louis University Libraries Special Collections)*

was the context in which Dr. McDowell's students began their own subterranean operations in St. Louis.[25]

Body-snatching escapades pitted McDowell and his students against the law and the will of the community. If McDowell or his students had been caught with a stolen corpse, they could have been prosecuted with a $500 fine, at the time an exorbitant fee, and up to twelve months in prison.[26] Yet the higher the risk medical students took to obtain cadavers, the tighter their fraternal bond grew. Because of the risk involved in their late-night visits to the graveyard, the medical brotherhood rarely mentioned their

Human dissections like these, both at the Missouri Medical College in 1887 and 1890, became standard in medical schools in the second half of the nineteenth century. McDowell's thinking on the necessity of dissection was somewhat mainstream in Europe at the time, but less so in the United States—and St. Louis. *(Images: Washington University School of Medicine)*

dissecting practices outside their own circles, and when they did, it was often in code. They referred to themselves as "brothers" or "old boys," playfully calling their leader "old Mac." McDowell's son Drake informed a classmate that the "old man" had plenty of "surgical business" in the spring of 1853, and "my abilities as a Getter have been largely called upon." Drake's "abilities as a Getter" was code for snatching dead bodies. The next semester he wrote his "Old Friend" again, reporting that he was "busily engaged" that winter, and his colleagues had "no less than nine subjects on the tables with several calls for *more beef*." Another student, Thomas Curtis, recalled visiting a city cemetery to exhume the body of a "first-rate subject." *Getting* meant body-snatching, and *subjects* or *beef* referred to cadavers.[27]

Fraternal pranks accompanied by alcoholic jollity further strengthened the bond between these "old boys." Dr. McDowell encouraged his students to imbibe. One Fourth of July, students hailed the professor as he delivered a two-hour speech on the evils of alcohol while taking swigs from a flask of brandy. Drake McDowell, like his father, became an alcoholic. While he served as the Demonstrator of Anatomy, his classmate John Snyder urged him to cease drinking and dissecting with the students. Drake tried to heed Snyder's advice so he could do "justice in the dissecting rooms in the fall" of 1853.[28] Morbid pranks followed late-night drinking bouts. One night McDowell and his students carried "a corpse they had just resurrected" in a covered wagon. A student discharged his gun. The doctor "whirled around, and saw the corpse sitting up pointing a revolver at him." Spooked, "McDowell took to his heels," while the pranksters cackled.[29]

Doctors bemoaned the anti-dissection sentiment that drove them underground. "We must study anatomy. We must dissect," argued the chair of surgery at McDowell's college, Dr. John T. Hodgen; "Let us have the privilege of dissecting without the curse of incarceration hanging over us." He offered a solution. People who died in alms houses, hospitals, and jails could "be taken to the dissecting rooms and used for the benefit of the public." For Hodgen, this measure, already widespread in Europe, was not immoral because deceased felons and vagrants often black and Irish were "a public charge."[30] Offering their bodies for the progress of scientific knowledge would be recompense. Besides, Hodgen argued coldly, the indigent "have no friends to grieve on the thought that they have been dissected." As long as dissection remained illegal, however, medical schools seeking to develop anatomical medicine had to exploit a limited supply of fresh corpses.[31]

The public in St. Louis denounced these exclusive medical fraternities, who served their colleges so loyally yet violated the sensibilities of the local community. While students at any college identified themselves as privileged beneficiaries within one of several polarized professional enclaves, the public often conflated all medical schools and their body-snatching minions into one big problem. One of the ways the public retaliated, as the 1849 disturbance at McDowell's college illustrates, was rioting. Between American Independence and the Civil War, about twenty anti-dissection mobs rioted against medical colleges in towns across the United States. One of the larger anatomy riots occurred in St. Louis on February 25, 1844, when passersby spotted the discarded remains of several dissected cadavers in an uncovered pit behind St. Louis University. Rioters targeted both of the city's medical colleges, but they only destroyed St. Louis University before the militia intervened.[32]

A mob stormed into McDowell's college five years later in 1849, before Mrs. Malter went missing, because a German family discovered that the grave of their deceased

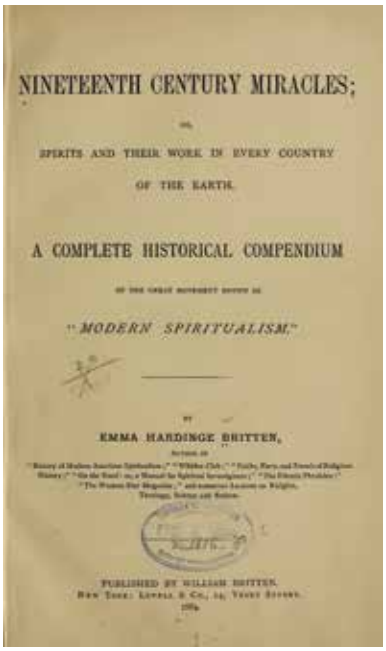
daughter was empty. They suspected Dr. McDowell and rightly so. In his own account, McDowell recalled how he narrowly avoided arrest by following the instructions of a glowing apparition of his dead mother. After stashing the corpse of this German girl in the loft of the college, he saw his mother standing near the table from which he had just taken the corpse. Following her instructions, he "laid like marble" on the dissecting table. The armed German posse entered the dissecting room and inspected each corpse: "They uncovered one body," recounted McDowell, " it was that of a man, the next, a man; then they came to two women with black hair, the girl they were looking for had flaxen hair." When they saw McDowell lying there, one man assumed he was just another corpse and announced to the others: "Here is a fellow who died in his boots; I guess he is a fresh one." Against all odds, the doctor slipped past the guards. The next day, he "dissected the body, buried the fragments and had no further trouble."[33]

As this story illustrates, McDowell's relationship with the dead was strange not only because it exceeded the bounds of the law and violated the will of the community but also because his morbid attachment to human anatomy exceeded the demands of science. McDowell believed that he possessed a special charism that enabled him to communicate with ghosts. McDowell's obsession with the supernatural was a unique variation of a popular American phenomenon called spiritualism, a belief in the power of mediums to communicate with spirits. The movement gained momentum in 1848, when New Yorkers Kate and Maggie Fox attracted national attention for their uncanny ability to channel dead spirits. When the English scientist Michael Faraday produced electromagnetic induction in the 1830s by passing an electric current over a conductor in a magnetic field, people imagined that electromagnetism composed the ultimate life-giving energy. Spiritualists theorized that apparitions, revelations, and visions transmitted from eternity to earth through electrical and magnetic fields. Dr. McDowell experimented with the mysterious forces of electricity and magnetism.[34]

Many shared McDowell's fascination with the elusive forces of electromagnetism. At a time when the word *scientist* had just become a common term for a new class of medical professionals who paired the noble pursuit of "science" with body-snatching, dissection, and experimental surgery, anatomical medicine seemed more mysterious and powerful than empirical and exact. Spiritualism paralleled the new science as an alternative theory. For much of the nineteenth century, the public remained impervious to the "professional" doctors who claimed that they, instead of mediums or mesmerists, were the true divines.[35] Spiritualism crossed classes, attracting even the most learned men and women. McDowell himself hosted a lecture series on spiritualism, and he regularly attended lectures of touring spiritualists. When the Fox sisters visited St. Louis in 1852, McDowell applauded their demonstrations.[36]

The same year the Fox sisters came to St. Louis, one esteemed gathering, which included the daughter of Senator Thomas Hart Benton, saw an apparition of a young woman named Helen Bennett, who was then in Egypt. When they rose to speak to the apparition of the girl, "*it vanished*." They immediately sought a medium to interpret the vision, who forecasted bad news: "The medium hand was guided without her will, and this was the reply: 'Helen Bennett was murdered on the desert by the Arabs on the 8th of May.'" The group panicked and called Dr. McDowell to investigate the incident further. Apparently, he had developed a reputation for knowing something about ghosts. McDowell's dual roles — ghost hunter and physician — blurred into one at this peculiar bedside call. One woman who witnessed the apparition justified appealing to the doctor's judgment on the grounds that he was "a man acknowledged to be (though eccentric) one of the learned men of the day." McDowell investigated the matter until he grew weary and offered his verdict to the group: "this is not magnetism, nor electricity, but a spiritual revelation."[37]

McDowell was so convinced of the liveliness of the dead that he prepared for the repose of his soul and the souls of his family for the afterlife. Though many of McDowell's students did not agree entirely with the doctor's unusual views, they shared an affinity with the spiritualist rituals to which McDowell introduced them. New recruit Charles Stevens happened to arrive in St. Louis in 1850 on the same night McDowell held a memorable funeral service for his son — perhaps a victim of the cholera epidemic. At midnight, all the medical students formed a candle-


NINETEENTH CENTURY MIRACLES;

SPIRITS AND THEIR WORK IN EVERY COUNTRY OF THE EARTH.

A COMPLETE HISTORICAL COMPENDIUM

"MODERN SPIRITUALISM."

BY

EMMA HARDINGE BRITTEN,

PUBLISHED BY WILLIAM BRITTEN.

Emma Hardinge Britten (1823-1899) first came to America from London to attend séances and write a book about the susceptibility of Americans to such ideas. However, a series of mystical experiences at these séances convinced her otherwise, and she became an active part of the spiritualist movement. She is perhaps best known for her 1884 book, *Nineteenth Century Miracles: Spirits and Their Work in Every Country of the Earth*, pictured here.

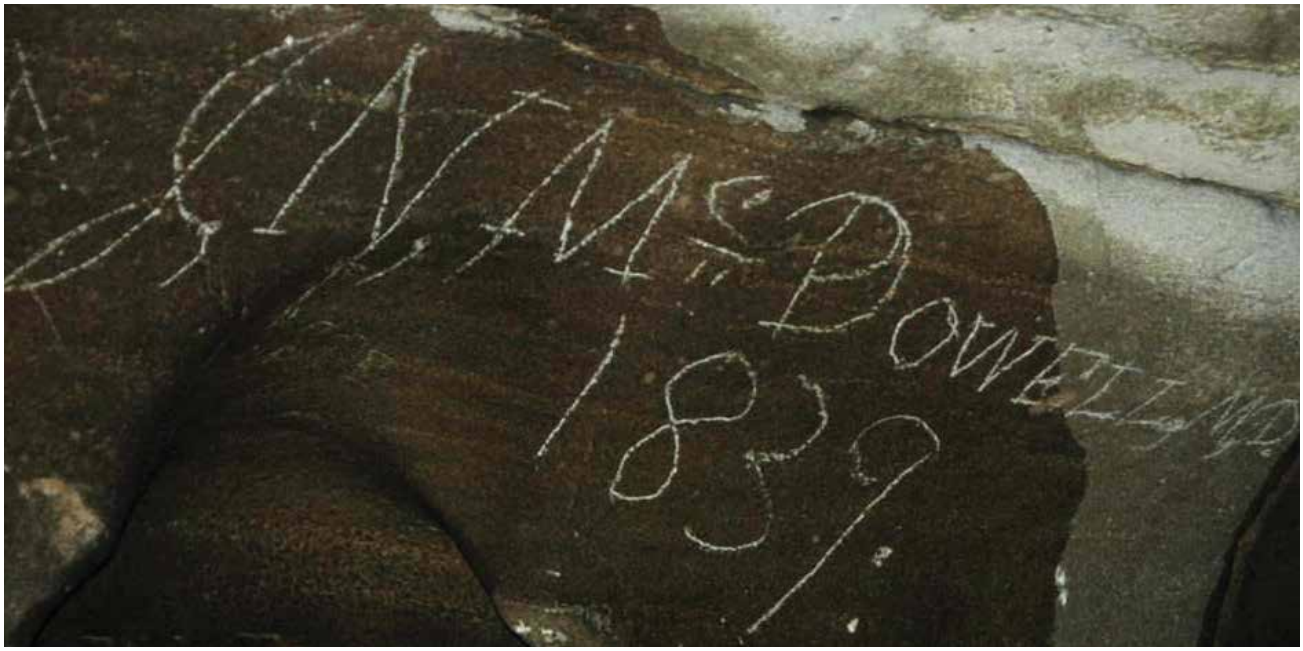
lit procession outside the college. The faculty carried a copper vase filled with alcohol and the remains of his small child. Stevens noted the eerie, almost liturgical uniformity of motion as the students silently followed the doctor to the rear of the college, where he resided. The doctor had prepared a vault in which his colleagues placed the copper vase for safe keeping.[38]

Dr. McDowell believed that normal burial customs stifled the dynamism of one's soul after death. That is why he interred his first wife atop a Cahokian Indian mound on the Illinois side of the Mississippi River. With the aid of a telescope, he often spied her tomb from the tower of his college.[39] When his daughter died, McDowell purchased a cave in Mark Twain's home town Hannibal, Missouri, to store the remains. He kept the body of his fourteen-year-old daughter suspended from the ceiling of the cave in an alcohol-filled copper cylinder. When he discovered in 1849 that some locals had been daring each other to break into the cave, open the cylinder, and yank his daughter's head into view, he transported her remains to the family vault behind the college. He believed an above-ground sepulcher, alcohol, and copper encasing reposed his family members in a netherworld between earth and heaven. McDowell thought these unorthodox burial rituals could open otherworldly communication with his deceased daughter, son, and wife.[40]

McDowell suspended his dead daughter from the ceiling of a cave because he theorized that natural deposits of saltpeter, a substance commonly used in gun powder, could preserve corpses. Several years earlier, spelunkers had discovered a partially mummified Indian in Mammoth Cave, Kentucky, which contained saltpeter.[41] Apparently, this discovery made an impression on the doctor. He once asked his son Drake, and his student Charles Stevens, to bury his remains in Mammoth Cave. McDowell even visited the cave in 1839 before he settled in St. Louis. One can still view McDowell's signature there, scratched into a large rock called "Giant's Coffin." The odd mausoleums, the alcohol, copper, and saltpeter — these burial methods were the bizarre culmination of the doctor's years of experience with the dead on dissecting tables. For McDowell, "rest-in-peace" had lost its traditional sacred meaning because dead bodies became scientific objects in his laboratory.[42]

Without centralized medical standards in the mid-nineteenth century, American popular culture encompassed the professional development of modern medical education and the progress of anatomical science. In this context, McDowell carved a niche for the medical profession in St. Louis by incorporating therapeutic and anatomical medicine, old and new worldviews. Instead of attempting to channel popular fear of death and dissection into respect for professional anatomy and medicine, McDowell towed a middle course that enabled him to thrive as an anatomist, healer, resurrectionist, and spiritualist.

Dr. Joseph Nash McDowell's defacement of Giant's Coffin in Mammoth Cave, Kentucky, dated 1839. *(Image: James St. John)*



NOTES

[1] "Mysterious Disappearance," *The Republican*, September 14, 1849 (St. Louis); Dr. John B. Johnson, "The Old Guard," *One Hundred Years of medicine and surgery in Missouri: historical and biographical review of the careers of the physicians and surgeons of the state of Missouri, and sketches of some of its notable medical institutions*, edited by Max A. Goldstein (St. Louis: St. Louis Star, 1900), 30.

[2] The "locofoco matches" McDowell waved in the air as the German mob came into view invoked the name of a radical populist movement during Jackson's presidential campaign known as locofocoism, or the Equal Rights Party. The doctor saw himself as a populist Southern Democrat, a man of the people. For more on the politics of Andrew Jackson and the Equal Rights Party, see Harry Watson, *Liberty and Power: The Politics of Jacksonian America* (New York, 1990).

[3] Dr. John F. Snyder, "Sketch of the Life of Dr. Joseph Nash McDowell," 1894, Snyder Collection, Missouri Historical Society (MHS); J.B. Johnson, *One Hundred Years of medicine and surgery in Missouri*, 30.

[4] Ibid.; "Mrs. Malter Found," *Philadelphia Inquirer*, November 23, 1849 (Philadelphia).

[5] For more anecdotes of McDowell, see Goldstein, ed., *One Hundred Years of medicine and surgery in Missouri*, 50. Dr. McDowell was so paranoid of the Jesuits that he often wore a brass breastplate under his shirt, carried a long bowie knife under his coat, and packed two single-barrel derringer pistols on his belt for protection. Account from Snyder, "Sketch of the Life of Dr. Joseph Nash McDowell." America had a long history of anti-Catholic vitriol. McDowell's anti-Catholic sentiment was influenced by broader anti-foreign political rhetoric and anti-Jesuit conspiratorial literature. For example, see Lyman Beecher, *A Plea for the West* (Cincinnati: Truman & Smith, 1835); Maria Monk, *Awful Disclosures of the Hotel Dieu Nunnery*, with an introduction by Ray Allen Billington (Hamden, Connecticut: Archon Books, 1962 [1836]); and Heinrich Boernstein, *The Mysteries of St. Louis, or, The Jesuits on the Prairie de Noyers: a western tale in four parts, complete in one volume* (St. Louis: Anzeiger des Westens, 1852). Also see Ray Allen Billington, *The Protestant Crusade, 1800-1860: A Study of the Origins of American Nativism* (Chicago: Quadrangle Books, 1938) and Dale T. Knobel, *"America for the Americans": The Nativist Movement in the United States* (New York: Twayne Publishers, 1996). So widely known was Dr. McDowell's unconventional bedside manner that even the famous American wit Samuel Clemens, better known by his pseudonym "Mark Twain," wrote an account of McDowell in his *Autobiography*. Clemens knew Dr. McDowell by reputation, but he also had a special acquaintance with the doctor, since his mother's half brother, James Andrew Hays (Jim) Lampton, was one of McDowell's students, sometime in the early 1850s, while Jim Lampton studied medicine at the Missouri Medical College. See Patrick Ober, *Mark Twain and Medicine: "Any Mummery Will Cure"* (Columbia: University of Missouri Press, 2003).

[6] Dr. J.F. Snyder, Virginia, IL, to Miss Ida M. Drumm (Stella M. Drum), St. Louis, MO, November 14, 1914, Dr. John F. Snyder Collection, MHS. See Estelle Brodman, "The Great Eccentric," *Washington University Magazine* 50 (December, 1980): 5-11.

[7] For more on the history of medicine in antebellum America, see Bonner, *Becoming a Physician*; Russell Charles Maulitz, *Morbid Appearances: The Anatomy of Pathology in the early Nineteenth Century* (Cambridge: Cambridge University Press, 1987); William G. Rothstein, *American Medical Schools and the Practice of Medicine: A History* (New York: Oxford University Press, 1987); William G. Rothstein, *American Physicians in the Nineteenth Century: From Sects to Science* (Baltimore: Johns Hopkins University Press, 1972); and Richard H. Shyrock, *Medicine and Society in America, 1660-1860* (New York: New York University Press, 1960).

[8] *The Daily Picayune* of New Orleans, Louisiana, listed McDowell as the Surgeon General of the Confederate Army as early as November 5, 1861.

[9] "A Spoiled Specter: The McDowell College Phenomenon Gives up the Ghost — A Hoax that Died Early," *St. Louis Globe-Democrat*, March 1, 1880. The *St. Louis Republic* reported in 1897 that "the old building at Eighth and Gratiot furnished the neighborhood with ghost stories for 20 years after." "M'Dowell's College Rises like a Ghost," *St. Louis Republic*, October 17, 1897. For a family account of the haunting at McDowell's vacant medical college, see Troy Taylor, *Haunted St. Louis: History and Haunting along the Mississippi* (Alton, Illinois: Whitechapel Productions Press, 2002). Also see John Rodabough, "The Eccentric Genius," *Frenchtown* (St. Louis: Christian Board of Publication, 1980), 63-75.

[10] Snyder, "Sketch of the Life of Dr. Joseph Nash McDowell." For biographies of McDowell, see Brodman, "The Great Eccentric," *Washington University Magazine*; Dr. Harold Bulger, "Early Years of the Missouri Medical College," *Medical Alumni Quarterly* 2:4 (July 1939), 193-204; Marjorie E. Fox Grisham, "Joseph Nash McDowell and the Medical Department of Kemper College, 1840-1845," *Missouri Historical Society Bulletin* 12 (1955-1956), 358-371; Dr. Robert E. Schlueter, "Joseph Nash McDowell (1805-1868)," *Medical Alumni Quarterly* (1937), 4-14; and James Walter Wilson, "Joseph Nash McDowell, M.D.," *The Register of the Kentucky Historical Society* 68 (Frankfort, Kentucky: 1970), 341-369.

[11] Joseph McDowell received his MD degree from Transylvania University, Kentucky, on March 16, 1827. His dissertation was on the human heart. For biographies of Joseph Nash McDowell's uncle, Dr. Ephraim McDowell, see August Schachner, *Ephraim*

McDowell: "Father of ovariotomy" and founder of abdominal surgery, with an appendix on Jane Todd Crawford (Philadelphia: J.B. Lippincott company, 1921) and George Gellhorn, *Ephraim McDowell: the father of abdominal surgery* (St. Louis: Interstate Medical Journal, 1910). For more on Daniel Drake's coterie, see Otto Jüttner, *Daniel Drake and His Followers: Historical and Biographical Sketches* (Cincinnati: Harvey Publishing Company, 1909).

[12] Thomas Neville Bonner concludes, *Becoming a Physician: Medical Education in Britain, France, Germany, and the United States, 1750-1945* (Baltimore: Johns Hopkins University Press, 1995), 7-8.

[13] After working briefly at Transylvania University, McDowell became professor of anatomy at the newly founded Jefferson Medical College in Philadelphia in 1827. He moved to Cincinnati in 1831 to work with Daniel Drake as an associate at the medical department of the University of Miami, which soon collapsed. He then helped found, alongside Daniel Drake and another well-known doctor, Samuel D. Gross, the famous though short-lived medical department of Cincinnati College. Samuel D. Gross, *Autobiography*, 70.

[14] For more on the dispute between Beaumont and McDowell that led to his expulsion from the Medical Society of Missouri, see Cynthia De Haven Pitcock, "Doctors in Controversy: An Ethical Dispute Between Joseph Nash McDowell and William Beaumont," *Missouri Historical Review* 60 (1965-1966), 336-349.

[15] Dr. George Johnson replaced McDowell as Chief Surgeon of the Marine Hospital in 1853. *Missouri Courier*, September 22, 1853 (Hannibal, Missouri).

[16] "Yes Medical Colleges," *Sunday Morning Republican*, October 30, 1853. Joseph N. McDowell, St. Louis, to Dr. Snyder, November 17, 1855, Snyder Collection, MHS. "Minutes of meeting of students of the Medical Department of the State University of Missouri," 1853, Snyder Collection, MHS. For more on the development of American medical schools, see William G. Rothstein, *American Medical Schools and the Practice of Medicine: A History* (New York: Oxford University Press, 1987).

[17] For more on the convergence of local healing practices and institutional medicine, see Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, 1987); Sharon R. Kaufman, *The Healer's Tale: Transforming Medicine and Culture* (Madison: University of Wisconsin Press, 1993); and *Healing and History: Essays for George Rosen*, Edited by Charles E. Rosenberg (New York: Neale Watson Academic Publications, Inc., 1979).

[18] Kenneth M. Ludmerer, *Learning to Heal: The Development of American Medical Education* (Baltimore: The Johns Hopkins University Press, 1996), 10-11, 19.

[19] John Thomas Scharf, *History of Saint Louis City and County*, Vol. 2 (Philadelphia: Louis H. Everts & Co., 1883), 1541. Dr. Frederick Graff to Charles Graff, June 29, 1838, St. Louis History Papers, MHS.

[20] Johnson, "The Old Guard," *One Hundred Years of medicine and surgery in Missouri,* 31. Drake McDowell, Lexington, to John (Snyder), April 7, 1854, Snyder Collection, MHS.

[21] Johnson, "The Old Guard," *One Hundred Years of medicine and surgery in Missouri,* 33. For more on the anatomical revolution in mid-nineteenth-century medicine, see Michael Sappol, *A Traffic of Dead Bodies: Anatomy and Embodied Social Identity in Nineteenth-Century America* (Princeton: Princeton University Press, 2002).

[22] See Charles E. Rosenberg, "The Therapeutic Revolution: Medicine, Meaning, and Social Change in Nineteenth-Century America," *The Therapeutic Revolution: Essays in the Social History of American Medicine*, edited by Morris J. Vogel and Charles E. Ronsenberg (University of Pennsylvania Press, 1979), 7-9, 20-21; John Harley Warner, *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820-1885* (Cambridge: Harvard University Press, 1986); and Charles E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1987).

[23] "Dr. McDowell's prescription for cholera," 1849(?), George R. Genl. Smith Papers, MHS. At least McDowell's patients fared better than cholera patients in Austria, Vienna, who were instructed to ingest "3 grains of powdered charcoal." Duc de Raguse, September 27, 1849, Medical Envelope, MHS. Flora (Caldwell) to Mrs. Mayer, November 16, 1849, Mayer Collection, MHS. For more on the cholera epidemic of 1849, see Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866*, 101-174.

[24] The Snyder Collection in the Missouri Historical Archives contains two lecture cards and one dissecting ticket signed by Dr. Joseph Nash McDowell sometime between 1849 and 1853. The student who received this dissecting ticket, Dr. John F. Snyder, needed it to meet the graduation requirements of the Missouri Medical College. A dissecting ticket cost around $10, the equivalent to $200 in 2012 dollars.

[25] For more on the comparisons between American and European medical education, see Bonner, *Becoming a Physician*; John Harley Warner, *Against the Spirit of the System: The French Impulse in Nineteenth-Century American Medicine* (Princeton: Princeton University Press, 1998); and Ludmerer, *Learning to Heal*, 29-33. For more on anatomy acts, see Ruth Richardson, *Death, Dissection and the Destitute*, 2nd ed. (Chicago: University of Chicago Press, 2000); Gary Laderman, *Sacred Remains: American Attitudes Toward Death, 1799-1883*, 84; Sappol, *A Traffic of Bodies*, 106, 123; David C. Humphrey, "Dissection and Discrimination: The Social Origins of Cadavers in America, 1760-1915," *Journal of Urban Health* 49:9 (September, 1973): 819-827; and Steven Robert Wilf, "Anatomy and Punishment in Late Eighteenth-Century New York," *Journal of Social History* 22:3 (Spring, 1989): 507-530.

[26] *The Revised Statutes of Missouri*, Vol. 1 (1850), Section

78:307. In Cincinnati, the fine reached one thousand dollars.

[27] Drake McDowell, St. Louis, to John Snyder, April 28, 1853, Snyder Collection, MHS. Drake McDowell, St. Louis, to John Snyder, December 14, 1853, Snyder Collection, MHS. For more on the coded language of dissecting practices, see Sappol, *A Traffic of Dead Bodies*, 74-97.

[28] Goldstein, ed., *One Hundred Years of medicine and surgery in Missouri*, 50. Drake McDowell, St. Louis, to John Snyder, April 28, 1853, Snyder Collection, MHS.

[29] Grisham, "Joseph Nash McDowell and the Medical Department of Kemper College, 1840-1845," 368.

[30] Body-snatchers targeted black and Irish paupers and vagrants because they were less likely to have family and friends to protect them. Also, they were often buried in mass, unmarked graves. Few noticed when their graves had been robbed. In the South, white slave-owners could earn money by volunteering the bodies of their dead black slaves to dissectors. A recent archeological survey on human bones discovered in the basement of a medical college in Georgia determined that 75 to 80 percent of these bones belonged to the bodies of African-Americans. See *Bones in the Basement: Postmortem Racism in Nineteenth-Century Medical Training*, Edited by Robert L. Blakely and Judith M. Harrington (Washington: Smithsonian Institution Press, 1997). For a brief history of cadavers and medical discrimination, see David C. Humphrey, "Dissection and Discrimination: The Social Origins of Cadavers in America, 1760-1915," *Bulletin of the New York Academy of Medicine* 49:9 (September, 1973): 819-827. Also see Wilf, "Anatomy and Punishment in Late Eighteenth-Century New York," 507-530.

[31] John T. Hodgen to John F. Snyder, Bolivar, Missouri, November 22, 1858, MHS. For more on grave-robbing, see Sappol, *A Traffic of Dead Bodies*, 98-135.

[32] Sappol, *A Traffic of Dead Bodies*, 106. For more on rioting in nineteenth-century America, see Paul Gilje, *Rioting in America* (Bloomington: Indiana University Press, 1996).

[33] Quoted in Rodabough, *Frenchtown*, 70.

[34] Barbara Weisberg, *Talking to the Dead: Kate and Maggie Fox and the Rise of Spiritualism* (San Francisco: Harper San Francisco, 2004), 89-90, 123. For more on Michael Faraday, electricity, and magnetism, see Alan Hirshfield, *The Electric Life of Michael Faraday* (New York: Walker, 2006).

[35] For more on the relationship between science and American religious thought, see Charles E. Rosenberg, *No Other Gods: On Science and American Social Thought* (Baltimore: The Johns Hopkins University Press, 1997).

[36] For more on the Fox sisters, see Weisberg, *Talking to the Dead*.

[37] Wilson, "Joseph Nash McDowell, M.D.," 354. Weisberg, *Talking to the Dead*, 148. Flora Byrne, St. Louis, to Eliza Mayer, July 17, 1852, Mayer Collection, MHS.

[38] Scharf, *History of Saint Louis City and County*, Vol. 2, 1526-1527.

[39] Rodabough, *Frenchtown*, 74.

[40] For more on McDowell's cave, see Ober, *Mark Twain and Medicine*, 89.

[41] Some doctors used saltpeter, along with arsenic acid and chloride, to preserve cadavers for dissection. This suggests another reason why Dr. McDowell placed his daughter in a cave filled with saltpeter. See "The Parkman Murder Case," *Daily Missouri Republican*, January 21, 1850.

[42] Wilson, "Joseph Nash McDowell, M.D.," 347. Ober, *Mark Twain and Medicine*, 90. For more on the Indian mummy found in Mammoth Cave, see Angelo I. George, *Mummies, Catacombs, and Mammoth Cave* (Louisville: George Publishing Company, 1994). For more on the sacredness of burials, see Gary Laderman, *The Sacred Remains: American Attitudes Toward Death, 1799-1883* (New Haven: Yale University Press, 1996), 8, 50.

"A Fiery Gospel Writ in Burnished Rows of Steel"

That's what Julia Ward Howe called the Civil War. Now, a century and a half later, the wounds and legacy of the Civil War remain with us—and here in the St. Louis region as much as anywhere.

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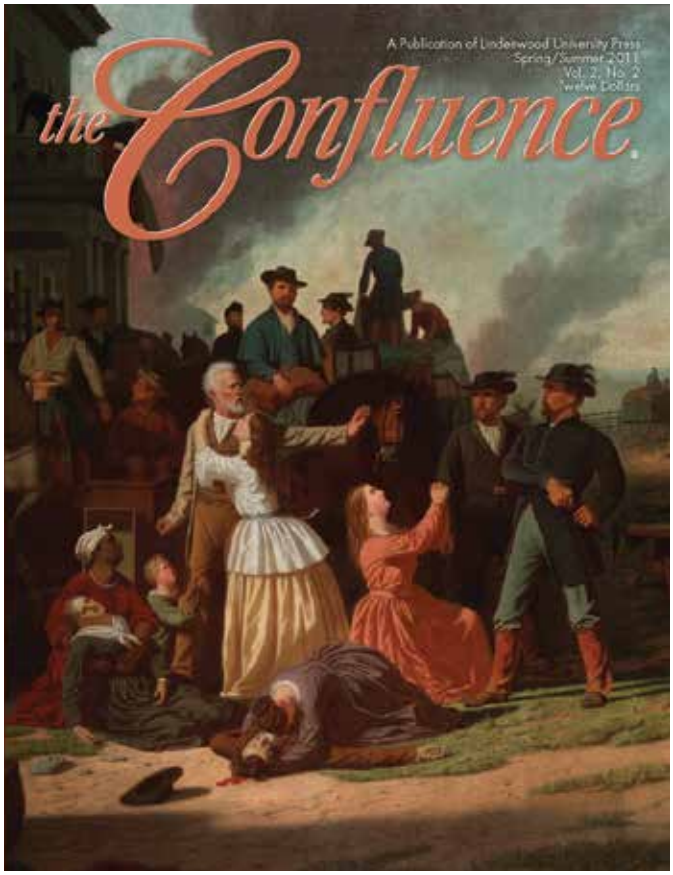

"'Making War on Woman'" and Woman Making War: Confederate Women Imprisoned in St. Louis during the Civil War

"The Lost Cause Ideology and Civil War Memory at the Semicentennial: A Look at the Confederate Monument in St. Louis"

"Conflict and Division within the Presbyterian Church"

"Experience of the Civil War by the School Sisters of Notre Dame in Washington, Missouri"

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"'Shall we be one strong united people…'"

"The Iowa Boys winter in St. Louis, 1861-62 "

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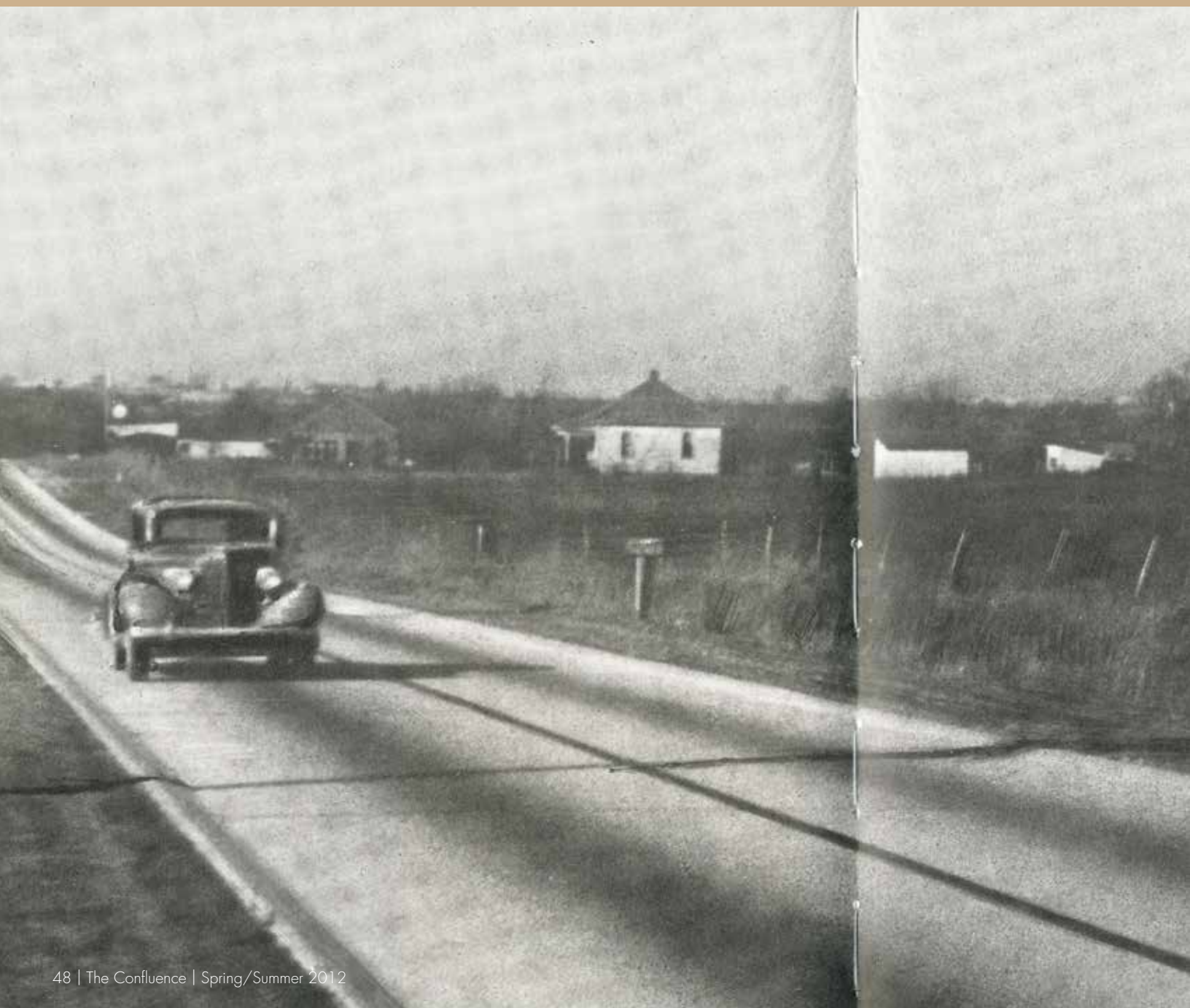
Missouri
Through Soviet Eyes

BY ILYA ILF AND YEVGENY PETROV



Ilf and Petrov made this journey along national highways and state routes, which traveled through small towns and the countryside. They made a habit of picking up hitchhikers frequently, since it gave them a way to interview "real" Americans. They arrived in Hannibal after spending time in Chicago, where they complained about the bitter cold. *(Image: Princeton Architectural Press)*

This large photo of rural Illinois gave Russians some idea of how the "American breadbasket" appeared. Pictures like this shaped the way Russians saw the United States for almost three decades. *(Image: Princeton Architectural Press)*

Good travel writing can be powerful. Few things offer new insights quite like having familiar surroundings seen through fresh eyes. When that new perspective comes from a very different cultural context, the results can be even more startling.

Such is the case with Soviet satirists Evgeny Ilf (1897-1937) and Yevgeny Petrov (1903-1942), who were immensely popular writers in the Soviet Union in the late 1920s and 1930s. While working as special correspondents for *Pravda* (the Communist Party newspaper in the USSR) in 1935, the two came to the United States to embark on a two-month road trip across the country and back. They bought a Ford in New York in late October, teamed up with Solomon Trone (a retired engineer who had worked in the USSR for General Electric) and his wife, Florence, whom they met there, and drove to California and back. In April, *Ogonek* magazine published the first of a series of photo essays based on the pictures Ilf took along the way. A year later, in 1937, an account of their journey and a selection of the photos were published in both the Soviet Union and the United States as O*ne-Storied America*. More recently, the Princeton Architectural Press published it as *Ilf and Petrov's American Road Trip*; it is by the publisher's permission that an excerpt appears here.

The foursome traveled to Buffalo, Cleveland, Detroit, and Chicago before passing through, of all places, Hannibal, Missouri; their account of "The Birthplace of Mark Twain" appears below. From there, they traveled via Kansas City and the Grand Canyon to Hollywood, where they spent two weeks. They returned via El Paso, San Antonio, New Orleans, Charleston, and Baltimore. It was quite a trek.

Born Ilya Arnoldovich Fayzilberg, Ilya Ilf first met Yevgendy Petrovich Katayev (who wrote as Yevgeny, or Evgeny, Petrov) when both worked for the Moscow-based *Gudok*, a magazine for railroad workers. They began writing collaboratively the following year. They gained national popularity with their 1928 novel, *The Twelve Chairs* (on which Mel Brooks loosely based a movie of the same name in 1970, with Dom DeLuise), and its 1931 sequel, *The Little Golden Calf*.

Born in Virginia, John Marshall Clemens (1798-1847) moved to several towns in Kentucky and Tennessee before moving to Missouri, in 1835, and Hannibal in 1839, when young Samuel was just four. He was trained as a lawyer and served as justice of the peace. His office looked like this when Ilf and Petrov visited Hannibal. It is the only building moved in downtown Hannibal. *(Image: Mark Twain Boyhood Home and Museum)*

One-Storied America was very popular with Soviet readers for a time, but the Communists banned it in 1948. By that time, both writers had already died—Ilf in 1937 of turberculosis, Petrov killed in a plane crash in 1942. The ban was lifted in 1956 after Nikita Khrushchev took office.

Among the striking features of this essay is the fact that they chose to visit Hannibal at all. Clearly, they knew Mark Twain and assumed that Soviet readers would as well. They marveled at the American juxtaposition of fact and fiction, at the way the fictitious stories were superimposed on the real Hannibal landscape.

A note on the photographs: Ilf took the photos, and originals no longer exist. These are the images that accompanied the original publication.

At the Birthplace of Mark Twain

It was November.

The wind came off Lake Michigan. It strolled about among the skyscrapers of Chicago, drove away the clouds, and bent down the bare trees on the lakeshore. We left Chicago without regret and laid our course to the west.

For a whole day, dense, compact fields of corn and wheat raced towards us. Latticed towers with windmills were built onto the roofs of farmers' houses: water pumps. You could see big red barns in the farmyards. Cows stood completely motionless in the fields like advertisements for condensed milk.

We crossed the Missouri River. We stopped in Kansas, or rather in its suburb, which is called Missouri, to drink some coffee and warm up a little.

Kansas is the center of the United States. And here in the center of the country is the exact mathematical point of that center, so to speak, the first person we chatted with, a café owner by the name of Morgen, turned out to be both a Bessarabian Jew and a Mason.

"Morgen," he said, introducing himself, "you understand? *Gut morgen*."

And then with a sad irony he added, "Almost Morgan."

A Spaniard and a Pole worked in the barbershop where we got our hair cut. An Italian shined our shoes. A Croat washed our car. This was America.

We had already begun to get used to the rain and cold. And suddenly, waking up early in the morning in the little town of Nevada in the state of Missouri, we saw blue sky. The sun came out. The town was covered in fallen leaves almost all the way to the windows. Although they were a little bit powdered with frost, we could tell the day would be bright and warm.

There are four true signs according to which Americans can determine with no mistake that the genuine West has actually begun. The announcements advertising *Hot Dogs*, which means "hot sausages" (dark New York humor!), disappear from the windows [of] little restaurants and drugstores, and the sign "*Bar-be-cue*" appears, advertising pork sandwiches. Next, the used automotive oil, which in the extravagant East is usually just poured out, is sold in the West to farmers for smearing their pigs with (a preventative measure used only out West to protect them from insects). Then ancient automobiles appear, among which the latest novelty of 1910 doesn't look too bad. And finally, instead of the optimistic "*All right*" and *"Okay*," you hear the no less optimistic but purely local "*You bet*" in the conversational speech of the denizens of the West.

The signs were right. Evidently, the West really had begun. We were driving out of winter and getting closer to summer. Like a film-strip shown backwards, pink, yellow, and even green foliage began to appear on the trees. From November, we returned to October and then to September.

We counted back and reckoned that if things kept up at this pace, in a couple of weeks, or by the beginning of December, we'd arrive in June. That's how it happened in the end. In California we caught up with the real summer. But it was still a very long way to California. We crossed the state of Missouri, heading for Hannibal, the town where Mark Twain spent his childhood.

At the intersection of three roads next to a small clapboard café, there was a signpost to which arrows with the names of towns were fastened. Apart from direction and distance, these arrows showed that in the West, just like in the East, the population selects the most beautiful and majestic names for their towns. It was pleasant to find out that there were only forty-two miles to Edina, sixty-six to Memphis, forty-four to Mexico, and just seventeen to Paris. We also found Hannibal here. The arrow showed that we needed to turn right and that there were thirty-nine

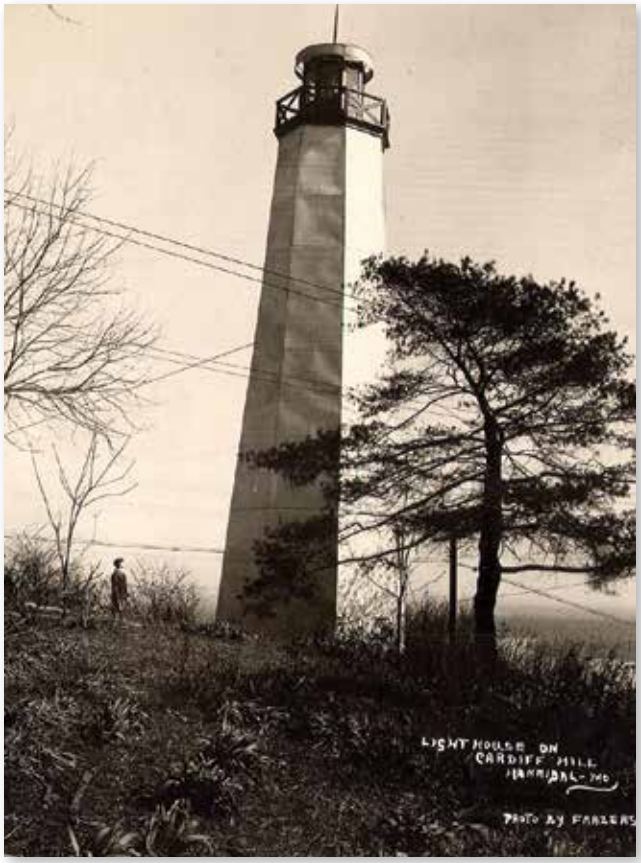
Many of the observations by Ilf and Petrov are tongue-in-cheek—they were, after all, satirists. One involved signs like this one, noting you always know where you are in America because there are always signs telling you so. *(Image: Princeton Architectural Press)*

This statue of Samuel Clemens in Hannibal's Riverview Park commemorated its most famous citizen three decades after Twain's death in 1910. (Image: Mark Twain Boyhood Home and Museum)

miles to go until we got to the city.

And as a matter of fact, after exactly thirty-nine miles, Hannibal appeared. At the entrance to the town stood a large sign announcing that the great humorist Mark Twain had spent his childhood here [and] that in the town could be found Mark Twain's old house, a park with a view of the Mississippi River, statues, caves, and so forth.

While we looked for a place to spend the night, it got dark, and so we had to postpone our survey of the town's sights until the next morning. We had just enough time to visit the museum on the main street. It was [a] temporary museum built during the centenary celebration of Mark Twain's birthday. It was located in the building of a bank called the Hannibal Trust Company, which, in a fortunate coincidence, had gone under not long before the



Completed in 1935, the Mark Twain memorial lighthouse was brand-new when Ilf and Petrov visited Hannibal. It sits on Cardiff Hill, made famous by Tom Sawyer and Huckleberry Finn. *(Image: Mark Twain Boyhood Home and Museum)*

anniversary. The rudder wheel of a riverboat hung above an enormous fireproof safe (alas, empty for the rest of time!). Mark Twain had spun just such a wheel when he sailed the Mississippi as a youth. There were also a few photographs, the bed in which the writer died (brought in specifically for the jubilee), his papers, and first editions of his books. One has to assume that in the days when the Hannibal Trust Company was at its peak, many more

Being Communists in good standing in the Soviet Union, Ilf and Petrov also photographed workers involved performing laborious jobs they thought portrayed capitalist society, such as these. *(Image: Mark Twain Boyhood Home and Museum)*

people came here.

In the morning we set off to walk around the town, which (an amazing thing for America!) is famous neither for automotive manufacturing, like Detroit, nor for battles and bandits, like Chicago. What made it famous were the literary characters of *The Adventures of Tom Sawyer,* the dearest and jolliest adventures that ever existed in world literature.

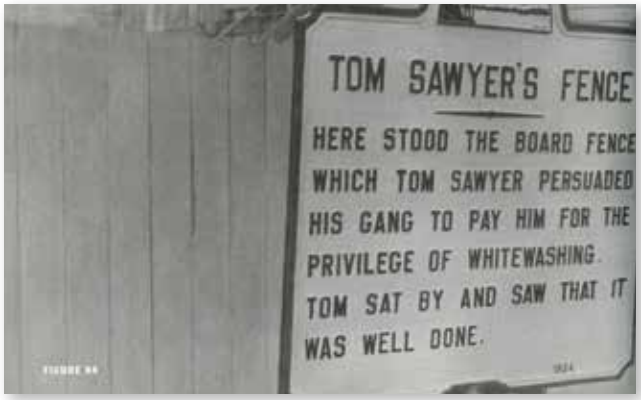
So this is what it's like, the town of Hannibal, the town of Tom Sawyer and Huck Finn!

As in all small towns in America, there were almost no people on the streets. But when we did come across some, they were genuine Twainian types.

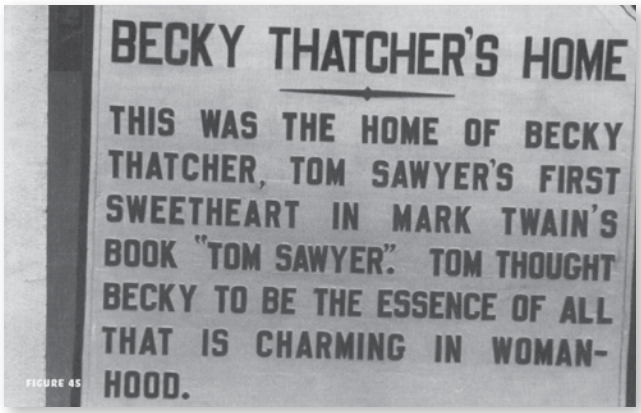
The street where Mark Twain, then barefooted Sam Clemens, spent his childhood has remained virtually untouched. A round white lamp with inscription "Mark Twain Home" hangs over the entrance to the house.

Two poor, virtually indigent elderly women, distant relatives of the Clemens family, live in the house. The two rooms on the first floor of the house are small and dusty. They contain ancient chairs with their springs coming out and wobbly little tables holding photographs.

Mark Twain's boyhood home as it appeared when Ilf and Petrov visited. The house uphill from the Clemens home was razed in 1937 to make way for a new museum, so was probably already gone when the arrived late in the year. *(Images: Mark Twain Boyhood Home and Museum)*



Part of the experience for Ilf and Petrov was seeing the recreated scenes from *The Adventures of Tom Sawyer* such as whitewashing the fence. One of the most striking features of Ilf and Petrov's writing is the assumption that Soviet readers were familiar with Twain and stories like this one from his books. *(Images: Princeton Architectural Press; Mark Twain Boyhood Home and Museum)*



The Becky Thatcher home wasn't part of the museum in 1935, although they could still visit and have tea poured by the "real" Becky Thatcher as they photographed her November 30, 1935. *(Image: Mark Twain Boyhood Home and Museum)*

"That," said one of the old ladies, "is the chair that Aunt Polly would always sit on. And there's the window that Peter that cat jumped out of after Tom Sawyer gave him the castor oil. And that there's the table where the family sat when they thought that Tom had drowned, when he was standing right here and eavesdropping the whole time."

The old lady was very glad to have guests.

"People so seldom come to see us," she said with a sigh.

A commemorative plaque with a depiction of the writer and an ideologically correct caption composed by an altruistic admirer of Mark Twain, a local banker, hung in the first room. It read, "The life of Mark Twain teaches us that poverty is less an obstacle that holds one back than a stimulus that pushes one forward."

However, the appearance of the poverty-stricken, forgotten old ladies eloquently refuted this fine philosophical concept.

Next to the little [house], there was a fence, a replica of the one Tom Sawyer allowed his friends to paint in exchange for an apple.

Another sign hung opposite the first one: "This was the home of Becky Thatcher, Tom Sawyer's first sweetheart."

Here, in front of this very house is where Tom Sawyer walked on his hands, hoping thus to attract the attention of the nice little girl who strolled decorously about the garden.

And that little [g]irl, who actually did exist, turned into a woman, got married (to a lawyer, apparently), and then grew old in Hannibal, and in 1915 she looked like this. This is the last photograph of her. Not long before his death, Mark Twain came to Hannibal and had his picture taken with her. A big photograph of the two old people with the touching caption, "Tom Sawyer and Becky Thatcher," hangs in the museum.

There was also an Indian living in Hannibal who was depicted by Twain as the character by the name of "Indian Joe." This picture was taken in 1921. The Indian was around a hundred years old. At least, that's what the inhabitants of the town of Hannibal said.

To conclude our trip we set out for Cardiff Hill, where one of the rarest monuments in the world stands: a monument to literary characters. Tom Sawyer is on the right. Huck Finn is on the left, holding a dead cat by the tail.

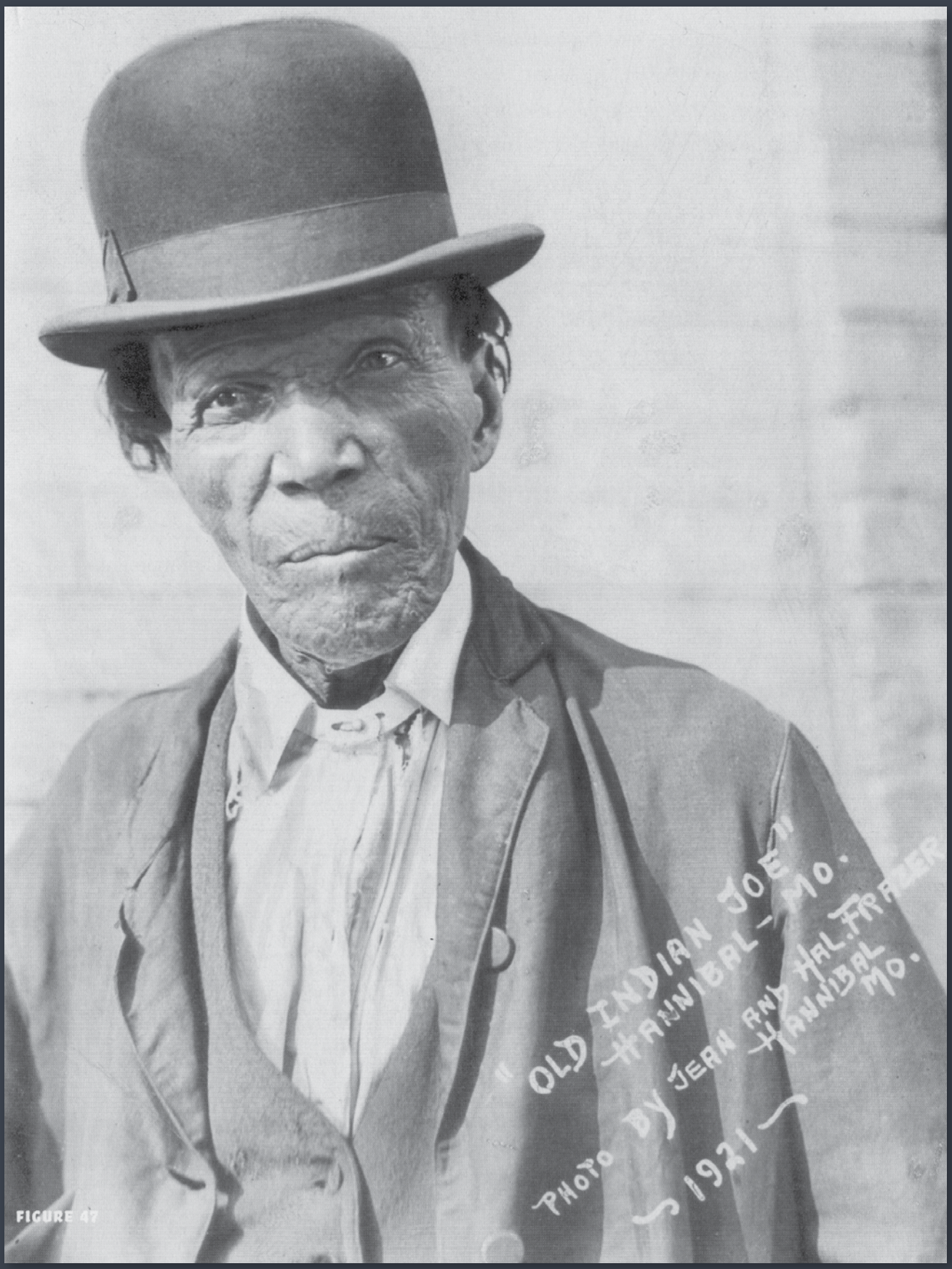

"OLD INDIAN JOE"
HANNIBAL - MO.
PHOTO BY JEAN AND HAL. FRAZER
HANNIBAL
MO.
1921

FIGURE 47

The Pilaster Store wasn't part of the museum at the time, although it was among the stops for tourists that built on the mythology of Twain's Hannibal. This Frazer photo suggests that Twain purchased candy here 60 years—although Samuel Clemens left Hannibal in 1853, he returned throughout his life. One wonders if the store sold cigars as well to encourage an older Mark Twain to return. *(Image: Mark Twain Boyhood Home and Museum)*

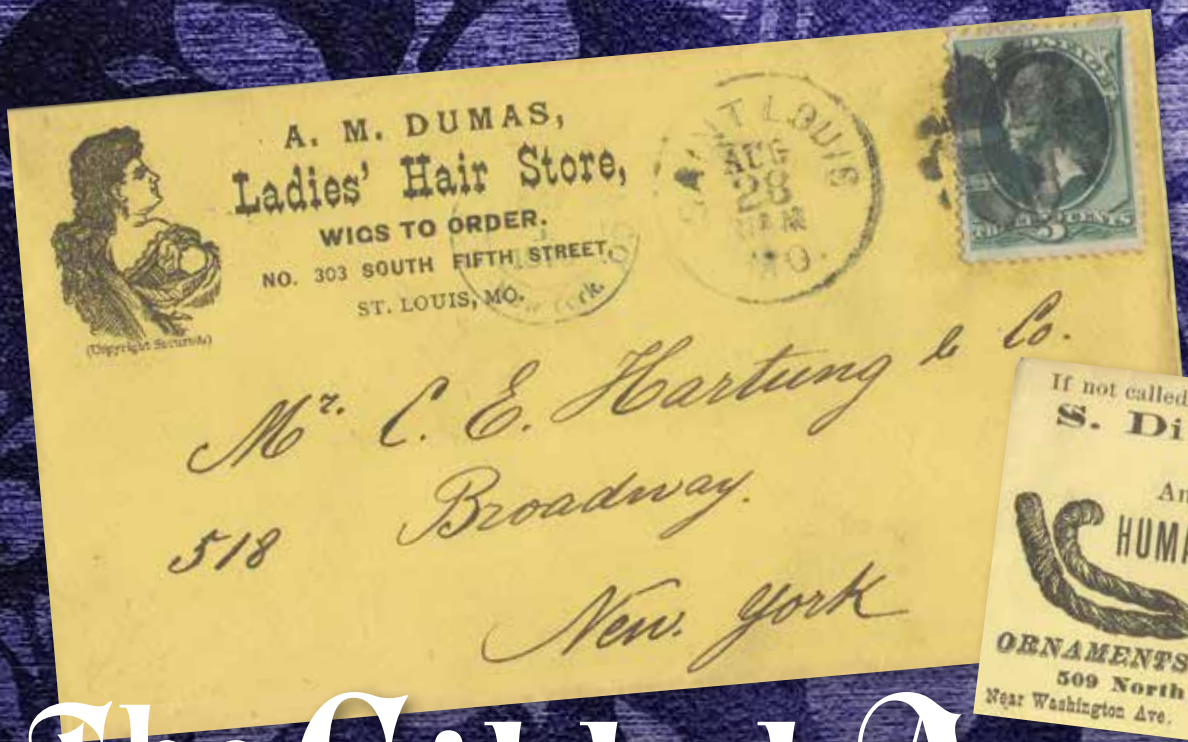
Ilf and Petrov also included this 1921 photo of "Indian Joe" from *The Adventures of Tom Sawyer,* credited to Jean and Hal Frazer. "Injun Joe" was the antagonist in *Tom*; despite this photo, Injun Joe died before the end of *The Adventures of Tom Sawyer*. *(Image: Princeton Architectural Press)*

This statue of Tom Sawyer and Huck Finn (1926) stands at the foot of Cardiff Hill, which appears in both *The Adventures of Tom Sawyer* and *The Adventures of Huckleberry Finn*. Clearly, Ilf and Petrov saw all the sites. *(Images: Princeton Architectural Press; Mark Twain Boyhood Home and Museum)*

The Gilded Age Hair Trade

IN ST. LOUIS

BY DAVID L. STRAIGHT



Top left: The corner card from the late 1870s sports an elegant evening hairstyle. Mrs. E. M. Dumas first appears in the 1870 city directory as a "Hair Dresser and Worker." By 1876 the entry is for A. M. Dumas and continues under "Hair — Human" until 1895. *(Image: Collection of the author)*

Top right: Saveris DiFranza, a "Dealer in and Manufacturer of Human Hair Goods, Hair Ornaments and Toilets" notes the succession from A. R. Sabini on the 1881 letterhead, which depicts a small wig for covering baldness or thinning hair at the top of the head. The attractive pair of curls on the corner card has a loop for hanging, when they are not being worn. DiFranza was listed as an employee of Florian DeDonato in 1883, but then independently from 1884 through 1888. *(Image: Collection of the author)*

Right: A. Pozzoni, whose 1869 corner card advertises him as a "Manufacturer and Importer of Human Hair, Gentlemen's and Ladies Wigs, Bandeaus, Braids, Curls, Puffs, &c., &c." was listed in the 1865 city directory as owning a "Hair Dye Factory," in 1870 as a "Hair Dresser and Worker," and then under "Hair — Human" from 1871 until 1884. In 1885, he was listed as a perfumer. The back of his cover shows a cooperative advertising scheme in which several unrelated businesses share printing costs; his ad is on the top row.v *(Image: Collection of the author)*

"Will you buy my hair?" asked Della.

"I buy Hair," said Madame. "Take yer hat off and let's have a sight at the looks of it."

Down rippled the brown cascade.

"Twenty dollars," said Madame, lifting the mass with a practiced hand.

"Give it to me quick," said Della.

— "The Gift of the Magi" by O. Henry

In O. Henry's classic story, after months of scrimping, Della had only managed to save $1.87 out of her living expenses to buy a Christmas gift—a watch chain—for her husband, Jim. Desperate, she turned to her only remaining resource—Della sold her hair. "The Gift of the Magi" reflects the trade in human hair that underlay the elaborate Victorian hairstyles. While O. Henry had no doubt witnessed such scenes in New York, where he wrote, Madame could have easily been a St. Louis hair dealer. In 1882, the St. Louis city directory listed twenty-five businesses under the heading, "Hair — Human," plus one under "Hair Jewelry."[1] In contrast, the 1865 St. Louis city directory listed just a single "Hair Dealer," Jules Pinaud; a hair dye factory; two companies under the heading "Hair Ornaments and Hair Jewelry"; plus eleven hair dressers. "Hair Workers" became a directory heading, distinct from "Hair Dressers," two years later. The heading "Hair — Human" first appeared in 1871 with fifteen listings. After 1882, the number of listings gradually declined until its last usage in 1899 with a single name, Mary DiFranza. By that time, several who had previously listed themselves under "Hair — Human" now selected the heading "Hair

1 The only large ads for the hair trade to appear in the St. Louis city directory during this period were in 1874 (page 1091).

Dresser" for their businesses. The heading "Hair Watch Chains" appeared only in the 1880 edition. While business records are not known to have survived for any St. Louis hair dealers, city directory listings—together with their "corner cards," the promotional graphics and text that accompany a return address on business envelopes—provide a glimpse of the hair trade in Gilded Age St. Louis.

In the story, Jim sold his pocket watch to buy a set of tortoise shell combs, "just the shade to wear in the beautiful vanished hair." Beyond the particular irony of their sacrifices to purchase Christmas gifts, Della sacrificed one of her most feminine attributes. The Irish dancer, actress, and courtesan Lola Montez advised women of the Victorian era that "Without a fine head of hair no woman can be really beautiful. A combination of perfect features, united in one person, would all go for naught without that *crowning* excellence of beautiful hair."[2] More than a century later, the significance of a woman's hair is no different. Wendy Cooper, in her study, *Hair: Sex, Society, Symbolism*, observed, "Beautiful hair has always been a major item of a woman's sex appeal. Its color, its texture, its softness, its scent, are potent weapons in her sexual armory."[3] For Victorian women, "hair was almost the only exposed, visible and distinctly feminine body part in a lady's appearance. Thus the association of hair and the female sex intensified as the rest of woman's body was covered, and as a result, hair was invested with an over-determination of sexual meaning."[4]

During the nineteenth century, only young girls were allowed to wear their hair loose and flowing freely; pinning up her hair was a mark of adolescence for a young woman. After the transition to womanhood, a woman let her hair down only in the most intimate circumstances. Victorian women generally wore their hair parted in the center and pulled back smoothly from the face into a wide array of knots, curls, poufs, or buns at the top, sides, or back of the head. As the more elaborate hairstyles worn by middle- and upper-class women often required more hair than they could grow themselves, wig shops and hairdressers did a brisk business supplying women with small hairpieces for incorporation into their natural hair. These included pin curls, bonnet curls, braids, "the marteau, a flat tail of hair for pinning on the back," "the chignon, a mass of hair coiled and pinned up at the back," and "the bandeau, a band of carefully dressed hair for the front which could be combed back with the growing hair."[5] Stationery and advertisements from St. Louis hair dressers and wig makers illustrate some of these hairpieces.

Servants, as well as women in the working and industrial classes, could not afford hairpieces, nor the time to elaborately dress their hair several times each day. Clearly, hairstyles were also emblems of class distinction. For those who had the time to devote and could afford them, complex hairstyles "became a dominant aspect of the conspicuous leisure, wealth, and waste which Veblen

As their name suggests, the European Hair Store was "constantly supplied with the choicest selections of human hair directly imported from relations in Europe," according to their advertisement in the 1874 city directory. James C. Elms is listed as a "Hair Worker" in the 1868-1870 city directories. He is listed under "Hair — Human" from 1871 until 1895 and then as a "Hair Dresser." The elegant woman, with loose hair holding a laurel wreath was their trademark. *(Image: Collection of the author)*

Florian DeDonato's unusual corner card displays a woman whose unpinned hair flows over the moon. The "Hair Dresser, Perfumer, Ladies & Gents Wig Maker" first appeared in the 1881 city directory under "Hair — Human" and gradually switched to "Hair Dresser" with dual listings in some years. *(Image: Collection of the author)*

held to be characteristic of an acquisitive society."[6] Women from different economic and social classes played opposite roles as the buyers or sellers of human hair. Convents and prisons, which required women to wear their hair short, were among the sources for hair.[7] However, the largest amount of hair came from poor and working-class women, like Della, who sold their hair to earn money. Rich women, in their preference for wigs and hairpieces made from human hair, rather than horse hair or feathers, adorned themselves with the hair of poor women.

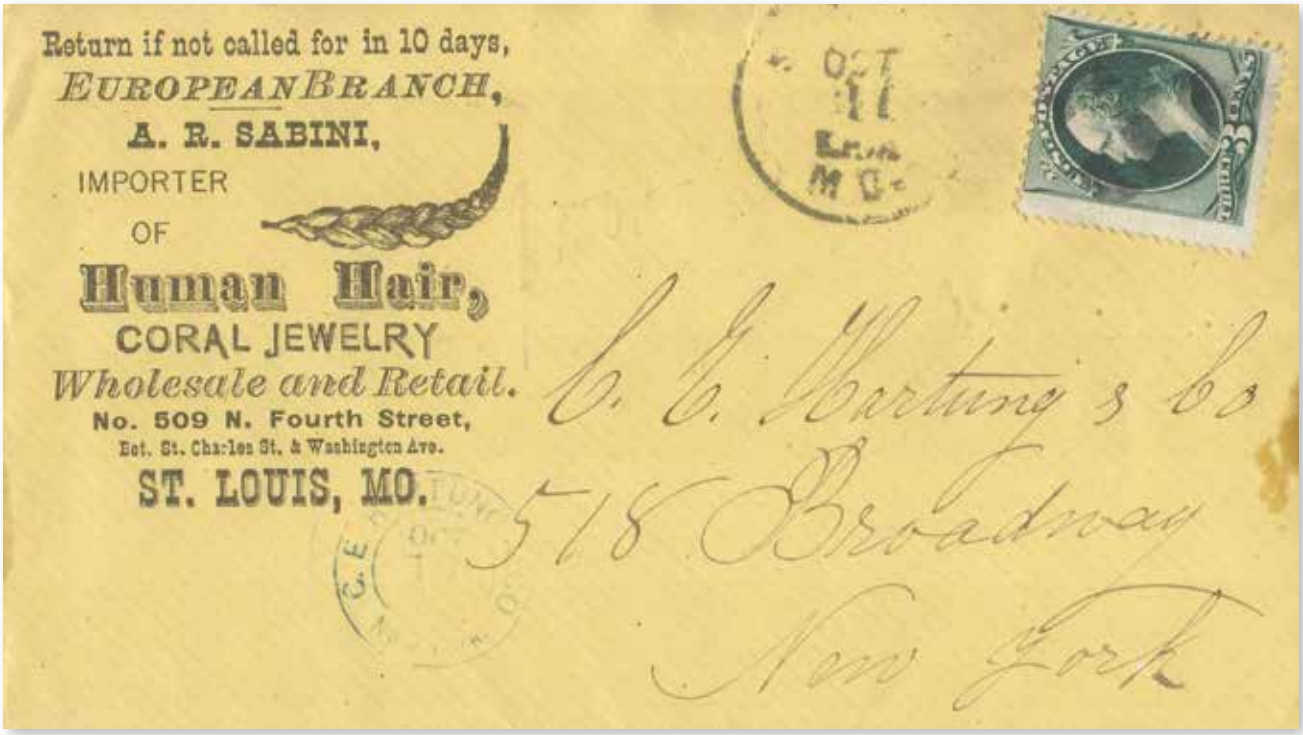
In addition to the hair acquired domestically, the United States imported between 150,000 and 200,000 pounds of human hair in 1859 and 1860, with a value close to $1 million. By the early 1870s, U.S. imports were estimated to be three times as great. Nineteenth-century Paris was the largest hair market, with other sources being Italy, Russia, Germany, Norway, and Sweden. "Hue, length, and texture" determined the price for human hair. "Hair of the ordinary colors ranges in price from $15 to $100 per pound, but that of gray and white from $100 to $200

Saveris DeFranza, a "Dealer in and Manufacturer of Human Hair Goods, Hair Ornaments and Toilets" notes the succession from A. R. Sabini on the 1881 letterhead, which depicts a small wig for covering baldness or thinning hair at the top of the head. The attractive pair of curls on the corner card has a loop as an employee of Florian DeDonato in 1883, but then independently from 1884 through 1888. *(Image: Collection of the author)*

per pound, and even then is not considered exorbitant."[8] All the covers accompanying this article, except one, are addressed to C. E. Hartung, a hair importer and wholesaler at 518 Broadway in New York. The local side of this mail exchange shows that there was not sufficient hair offered for sale in St. Louis to meet local demand. The letters are mainly orders for hair and supplies along with haggling over prices and excuses for late payments. In a typical exchange, on April 20, 1878, Mme. A. R. Sabini ordered, "send me ½ lb of real natural curly hair 8 and 10 inch strand." Seven days later, she wrote to complain, "I received your invoice today and found that your prices are entirely too high. . . . I won't pay more than $16.00 for curly hair longer than what you sent to me." Stripped of its intimacy and personal connections, Della's hair was reduced to a mere commodity.

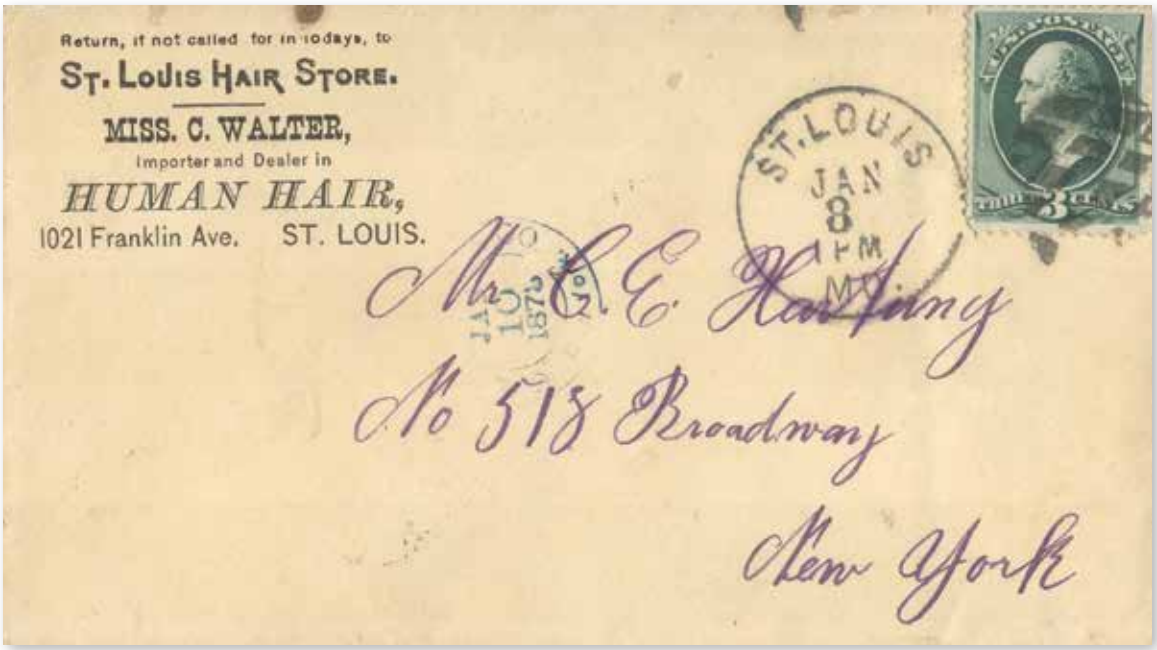
A sideline of the hair trade was its use for jewelry. The practice of exchanging hair as tokens of love or friendship dates to at least the sixteenth century. Victorian lovers exchanged hair at the time of engagement or marriage; hair was considered too personal to exchange before engagement. Such hair might be displayed behind glass in a locket or pendent, or woven into personal items such as rings, bracelets, watch chains, brooches, or cuff links. However, following the death of Victoria's husband, Prince Albert, and the Civil War in the United States, hair jewelry became increasingly popular as a sign of mourning.

The corner card from 1877 shows a braid used to augment some hairstyles. Mme. A. R. Sabini, an "Importer of Human Hair, Coral Jewelry — Wholesale and Retail" first appears in the 1872 city directory. In 1880, Sabini is listed in partnership with Saveris DiFranza and the following year DiFranza had taken over the business. *(Image: Collection of the author)*



General Notes:

All the covers except Pozzoni (1869 — 3¢ rose Washington) and DeDonato (1891 — 2¢ carmine Washington) are franked with the 3¢ green George Washington stamp widely used in the 1870s and early 1880s. The St. Louis duplex cancels consist of a circular date stamp and a killer of lines, grids, or geometric shapes to deface the stamp. Many have the blue double-circle receiving stamp of C. E. Hartung & Co. in New York. All are owned by a private collector who wishes to remain anonymous.



The St. Louis Hair Store, owned by Miss Catherine Walter, first appeared in the 1874 city directory under "Hair Work and Wigs" although covers are known from the previous year. Apparently, she married in 1879 when her listing changed to Catherine Sporleder, formerly C. Walter. She last appeared in the city directory in 1885. *(Image: Collection of the author)*

Rather than paying a commission to professional hair workers to weave the desired pieces, many preferred to make their own keepsakes. This insured that the hair used would indeed be that of the deceased loved one. Women's magazines such as *Godey's Lady's Book* or *Peterson's Magazine*, along with several editions of Mark Campbell's book, *Self-Instructor in the Art of Hair Work*, contained patterns and instructions for this Gilded Age craft. Some families constructed elaborate wreathes, with hair contributed by each of the members.

NOTES

[1] The principle city directories in St. Louis were *Edwards' Annual Directory to the Inhabitants, Institutions, Incorporated Companies, Manufacturing Establishments, Business Firms, etc., etc., in the City of St. Louis* published from 1864 until 1872 and *Gould's St. Louis City Directory,* which began publication in 1872.

[2] Lola Montez, *The arts of beauty: or, Secrets of a lady's toilet: with hints to gentlemen on the art of fascinatin*. (New York: Dick & Fitzgerald, 1858), 80.

[3] Wendy Cooper, *Hair: Sex, Society, Symbolism* (New York: Stein and Day, 1971), 65.

[4] Galia Ofek, *Representations of Hair in Victorian Literature and Culture* (Burlington, Vermont: Ashgate, 2009), 3.

[5] John Woodforde, *The Strange Story of False Hair* (London: Routledge & Kegan Paul, 1971), 83-86.

[6] Ofek, *Representations of Hair,* 2.

[7] Victoria Sherrow, *Encyclopedia of Hair: A Cultural History* (Westport, Conn.: Greenwood, 2006), 387.

[8] Mark Campbell, *Self-Instructor in the Art of Hair Work* (New York: [s.n.], 1875), 11-12, reproduced in Mary Brett, *Fashionable Mourning Jewelry, Clothing & Customs* (Atglen, Pennsylvania: Schiffer, 2006).

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Inside back cover: Human hair was also used for making wreaths, such as this mourning wreath; they often surrounded a photo or epitaph of the departed. For more on the human hair trade in the Gilded Age, see David Straight's ""Gilded Age Hair Trade in St. Louis," inside. *(Image: St. Charles County Historical Society)*

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