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Contents

VOLUME 18 NO. 1 1995
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PUBLIC MONUMENTS AND OUTDOOR SCULPTURE

Introduction: Public Monuments and Outdoor Sculpture 3
Dennis R. Montagna

PUBLIC SCULPTURE: HISTORY AND CULTURE

America Celebrates Its Past: The Hall of Fame of Great Americans 5
Sally Webster

Kalamazoo's Memorial to Martin Luther King, Jr. 8
Michael W. Panhorst

Rocky Too: The Saga of an Outdoor Sculpture 9
Danielle Rice

Rocky in bronze, Philadelphia Inquirer *editorial* 10
Rick Nichols

Bringing Monuments to Life at Gettysburg 12
Richard H. Putney

INVENTORY AND ASSESSMENT

SOS! Where Are We Now and Where Are We Going? 15
Susan Nichols

Sculpture Inventories Around the World 18
Susan Nichols

In Australia 18
Donna Midwinter, Sally Couacaud, and Kathy Peters

In Argentina 20
Tony Rajer

In Finland 21
Lena Wikstrom

In Great Britain 22
Catherine Moriarty

Kitson *Hikers* Capture a Half-Century of Corrosion History 23
Susan I. Sherwood

CARING FOR OUTDOOR SCULPTURE

Caring for Outdoor Bronze Sculpture 26
Dennis R. Montagna

The Central Park Monuments Conservation Program 29
Mark Rabinowitz

Long-Term Care for Sculpture Collections 31
Diane M. Buck

Planning Ahead for the Care of New Artworks 33
Margaret Robinette and John Dennis

Art in New York City's Public Schools 36
Michele Cohen

Cleveland's *Fountain of Eternal Life* Gets 99-Year Lease on Life 38
Michael W. Panhorst

NPS Cares for Gettysburg's Monuments 41
Dennis R. Montagna

Saint-Gaudens National Historic Site Interprets Conservation 45
Judith Nyhus

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Dennis R. Montagna

Public Monuments and Outdoor Sculpture

In ever-increasing numbers, government agencies and public organizations are embarking upon the cleaning and repair of the sculpture and commemorative monuments that have been placed in their care. These efforts have been inspired, in part, by Save Outdoor Sculpture! (SOS!), the nationwide effort to inventory all sculpture in the public realm and elevate the preservation needs of these resources in the public mind. Other sources of inspiration have been the highly publicized conservation projects for well-known monuments like the Statue of Liberty and, more recently, the 1993 conservation of the colossal bronze, Armed Freedom, atop the dome of the U.S. Capitol in Washington, D.C.

Daniel Chester French and Henry Bacon, Dupont Memorial Fountain, *1921, marble. Dupont Circle, Washington, D.C. Photo by the author.*

The National Park Service and other preservation-based institutions have correspondingly seen a dramatic increase in public requests for information on the appropriate steps to plan and implement monument conservation projects and programs. But not all treatment programs have been well-informed or well-conceived. Many have been quick-fix attempts to carry out dramatic sculpture "facelifts" and have resulted in the permanent damage of the very cultural resources that their owners had hoped to preserve. It seemed to us, and to Susan Nichols, who directs Save Outdoor Sculpture! and co-edited this issue of *CRM*, that a collection of articles presenting views, research, and experiences of those who commission, curate, and study public sculpture and monuments would be both useful and timely.

The impetus to preserve sculptural monuments often begins with a recognition of their social, cultural, and aesthetic value. Therefore the first articles presented here consider the roles of sculptural commemoration, past and present. Professor Sally Webster shares with us the early stages of her ongoing research into the history and implications of the Hall of Fame, the collection of nearly 100 bronze busts that forms a pantheon of the nation's heroes as determined through popular election. As a companion piece, we include Michael Panhorst's discussion of the compelling monument in Kalamazoo, Michigan, erected in 1989 to memorialize both Dr. Martin Luther King, Jr. and the Civil Rights Movement that was his life's work. The close proximity between King's time and our own helps to make the meaning of his monument more accessible. But what about monuments created in the distant past? Richard Putney considers this question and offers a very creative solution in his discussion of the course he team-taught last spring at the University of Toledo. Through various means, he immersed his students in the ethos of the 19th century and turned them from students of the 1990s to monument designers of the 1890s.

Questions about the civic role of a fictional hero arise in Danielle Rice's essay, Rick Nichols' *Philadelphia Inquirer* editorial, and Tony Auth's cartoon on the public controversy that swirled around the placement of the bronze portrait of Rocky Balboa atop the steps of the Philadelphia Museum of Art.

Planning for the long-term preservation of sculptural resources begins with compiling an inventory to serve as the basis for condition assessments that, in turn, will inform whatever decisions are to be made about conservation and maintenance. Since its establishment in 1989, SOS! has attempted, with much success, to inventory the nation's publicly accessible outdoor sculpture and to raise awareness about the need for its care. Susan Nichols provides a five-year progress report on SOS! Through the writings of correspondents in England, Australia, Finland, and Argentina, we can also glimpse survey and assessment efforts being carried out in other parts of the world.

Inventories and computerization of their products enables one to both perceive connections and trends in commemoration, and to gain insights that may not have been readily apparent. The American Monuments and Outdoor Sculpture database (AMOS), a national sculpture survey, revealed that many copies of Theodora Alice Ruggles Kitson's *Hiker* existed throughout the United States. This realization led to the research

Cover Photo: Monument to General William Tecumseh Sherman, 1903, Grand Army Plaza, 59th Street and Fifth Avenue, in New York City's Central Park. Augustus Saint-Gaudens, sculptor; McKim, Mead, and White, architects. Photograph ca. 1925, courtesy of Phyllis Ellin.

program that Susan Sherwood discusses in her article on the Kitson *Hiker* Project. This study, a joint effort of the National Park Service and the University of Delaware, is helping us to isolate various corrosion factors through the examination of 50 bronze replica casts of Kitson's Spanish-American War soldier placed throughout the United States between 1921 and 1965.

Carrying out good research into the cultural and social history of sculpture and monuments, compiling good inventory information, and understanding the mechanisms of deterioration are all necessary if one is to make good decisions about conservation treatments and the long-term care of these important cultural resources. The articles that follow in the next section all consider various aspects of sculpture and monument management. The first of these provides a general historical view

Confederate Memorial, Jacksonville, Fla.

of bronze cleaning philosophy and treatment in the United States. It is followed by a series of case studies written by collections managers, conservators, and arts administrators and advocates. Mark Rabinowitz, Director of Conservation and Sculpture at New York's Central Park, reports on current efforts to conserve and maintain the more than 50 works that comprise the park's sculpture collection. An even more daunting number of monuments to be cared for can be found at Gettysburg National Military Park, home to more than 400 commemorative works. In 1989, the National Park Service's Mid-Atlantic Regional Office (MARO) carried out a condition assessment of the collection and designed a maintenance program for the park. The article included here describes the assessment and reports on the program's results after its first five years of work.

Diane Buck's article discusses long-term commitments to preserve other outdoor sculpture collections, with an emphasis on the care of recent works. New sculpture, often fabricated with a wide array of materials and structural systems, presents particular preservation challenges. Margaret Robinette and John Dennis present a series of case studies that show how various owners care for their new works. Michele Cohen considers a similar theme in her article on the efforts of the New York City Public Schools to bring artists and conservators together during the design of new sculpture to facilitate future care. From the care of sculpture collections, we move to Michael Panhorst's case study of the creative business/civic partnership that resulted in the successful conservation, and a commitment to perpetual care, of an important individual monument, Cleveland, Ohio's *Fountain of Eternal Life*.

Exhibitions can be valuable tools for enhancing public awareness and support for conservation of cultural resources. Through photographs and interpretive text, Judith Nyhus recreates a portion of the recent exhibit on continuing efforts to conserve the important collections at Saint-Gaudens National Historic Site.

The articles presented here suggest that the care of public sculpture has many well-informed advocates. In efforts to create more, organizations and institutions like the American Institute for the Conservation of Historic and Artistic Works [AIC], the National Institute for the Conservation of Cultural Property [NIC], and the National Park Service have developed educational programs and publications aimed at helping owners of public sculpture to plan better for the care of these resources.

NPS-MARO organized two week-long national courses for collections managers in the preservation of outdoor monuments: in Washington, D.C. and Gettysburg, Pennsylvania in 1991, and in Chicago, Illinois in 1992. With the cosponsorship of SOS! and the help of local host organizations, the office will conduct smaller-scale, regional courses designed to reach a wider audience. In a similar vein, AIC has recently published its *Guide to the Maintenance of Outdoor Sculpture*, a brief but comprehensive treatment of issues involved in planning and implementing long-term outdoor sculpture maintenance programs.

The strong popular and professional interest in outreach programs like these suggests that support is growing for sculpture preservation. Research and development of better treatment and maintenance techniques, coupled with concerted efforts to educate collection owners and managers on the need for well-conceived maintenance programs, offers the best hope for the long-term survival of a vulnerable and irreplaceable body of artistic works.

Dennis R. Montagna is an Architectural Historian in the Mid-Atlantic Regional Office of the National Park Service, Philadelphia, Pennsylvania. He is a guest editor of this issue of CRM.

Sally Webster

America Celebrates Its Past
The Hall of Fame of Great Americans

The design of the Hall of Fame of Great Americans, as well as the portrait busts it contains, represent a traditional, academic style of art. Although currently ignored by historians and denigrated by supporters of modernism, this landmark remains an extraordinary example of one of the ways Americans have celebrated their past.

The Hall of Fame of Great Americans is a 630'-long open-air colonnade designed by Stanford White as part of an architectural ensemble connecting three buildings on a bluff overlooking the Harlem River in the Bronx, New York (figures 1 & 3). Originally part of New York University (NYU), it was deeded to Bronx Community College, City University of New York (CUNY) in 1973, when NYU consolidated its campuses at Washington Square in Manhattan. On each side of a curving pergola are 102 niches separated by Corinthian pillars that currently house 98 portrait busts (figure 2). The overall impression is of a graciously orchestrated pilgrimage through American history.

The Hall of Fame of Great Americans was conceived by Dr. Henry Mitchell MacCracken, New York University's chancellor at the turn of the century, as a national patriotic and educational shrine. Together with White, he envisioned an American pantheon based on various European models—the Pantheons in Rome and Paris, Westminster Abbey in London, and the Valhalla in Regensburg, Germany.

Today, if one thinks about Halls of Fame at all, it is probably in the context of the better-known Baseball Hall of Fame in Cooperstown, New York which is, in reality, a spin-off of the Hall of Fame of Great Americans. As of 1977, there were over 40 halls of fame in the United States and Canada, all of which trace their history back to the granddaddy of them all, the Hall of Fame of Great Americans in the Bronx. With its kitsch connotations and overt appeal to patriotism, the Hall of Fame is a difficult institution to defend in today's world. Also, its design, and the portrait busts it contains, represent a traditional, academic style associated with official art that may not have much resonance for modern viewers. While it may be largely ignored by cultural and art historians, this landmark demonstrates one way in which Americans have memorialized their heroes.

Although MacCracken was the moving force behind the establishment of the Hall of Fame, another motivating factor was White's desire to include an architectural structure that would create a formal entrance to the west end of the campus. In order to justify the expense, MacCracken suggested the creation of a Hall of Fame as an extension of the university's educational mandate.

MacCracken was born in 1840 in Oxford, Ohio, where, as a precocious student, he graduated from its Miami University at the age of 17. He then worked briefly as a school administrator, but wishing to further his ambitions as an educator, he studied theology at Princeton Theological Seminary. Aside from a year's trip

1. The Hall of Fame of Great Americans, Bronx, New York. Photo courtesy of the Hall of Fame.

2. Pergola and portrait busts of the Hall of Fame. Photo courtesy of the Hall of Fame.

to Europe where he "pursue[d] philosophical and theological studies..., visiting Tübingen and Berlin, the stronghold of Hegelian philosophy," he lived in Ohio until 1881, when he was appointed Chancellor of Western University of Pennsylvania (now the University of Pittsburgh). Three years later he was hired by the University of the City of New York (renamed New York University in 1896) as professor of philosophy.

In 1885 he was appointed Vice Chancellor of NYU and six years later became its Chancellor. This was a watershed period for the University and MacCracken, an able administrator, had been promoted to oversee its expansion and development including the decision to create University College, an undergraduate campus for men, in the then-rural South Bronx.

Money for the construction of the new NYU campus buildings, including the Hall of Fame, was donated by Mrs. Finley J. Shepard (Helen M. Gould Shepard), daughter of Jay Gould, who was not enshrined in the Hall of Fame, but whose name was given to the library, the central building of White's architectural ensemble.

MacCracken's plans for the Hall of Fame were ambitious. He drew up a constitution that stipulated that national elections were to be held every five years. Furthermore, nominations should not be dominated by statesmen and the military, as was common in Europe, but represent a broad range of professionals including authors, educators, preachers, humanitarians, social and economic reformers, scientists, engineers, physicians, inventors, missionaries, explorers, judges, businessmen, philanthropists, artists, and actors, as well as politicians and soldiers. In order to insure that no one group with vested interests controlled the election, and to convey a certain dignity to the proceedings, three independent bodies were charged with governance: a board of directors composed of college presidents; the Faculty Senate of NYU who would coordinate the nominations and election; and a board of 100 judges representing all states "chosen among these classes of citizens—University or College Presidents and Educators; Professors of History and Scientists; Publicists, Editors and Authors; and Judges of Supreme Court, State or National." Regarding requirements for nomination, the constitution stated that no one could be elected who was not born in the United States and who had not been deceased for at least 10 years.

In order to garner public support of this new patriotic endeavor, MacCracken enlisted the efforts of newspaper editors and civic organizations. By May 1, 1900, more than 1,000 nominations had been received from the public, a figure that exceeded anyone's expectations. These names were then forwarded to the Faculty Senate, which could nominate additional persons. This list was put to a vote and a select group of 234 nominees was passed on to the national judges. Their votes were the decisive ones, and as evidence of the seriousness with which these nominations were taken, 97 out of the 100 judges responded. The final list contained 29 persons who had been elected by the required majority vote.

The Hall of Fame was officially opened on Decoration Day (now Memorial Day), May 30, 1901, an anniversary now observed annually at the Hall. Chancellor MacCracken presided at the dedication ceremonies and in his opening remarks, he commented specifically on the public nature of this new institution: "the University regards itself only as a trustee of this national patriotic and educational shrine that belongs to all the people of the United States." During its first decades, the Hall commemorated its inductees with plaques. The first of the 98 memorial busts that adorn the Hall of Fame was created in the early 1920s.

Originally, the honorees were to be categorized into 15 different sections (ultimately there would be 14). For the first election, however, only seven were created, beginning with the Statesmen's Corner. Here seven men were honored: Benjamin Franklin, George Washington, John Adams, Thomas Jefferson, Daniel Webster, Henry Clay, and Abraham Lincoln. The next section was the Jurists' (now called Lawyers and Judges) where John Marshall, James Kent, and Joseph Story were honored. In the Soldiers' Section (now called Military) were Ulysses S. Grant, Admiral David Farragut, and Robert E. Lee.

Then came a section called the Septimi Section, a name since abandoned, which originally included representatives from uncategorized professions such as George Peabody, Peter Cooper,

and Gilbert Stuart. The fifth was the Scientists' Section, still so named, where Robert Fulton, Samuel F.B. Morse, Eli Whitney, John J. Audubon, and Asa Gray were honored. Next, the Teachers' Section eulogized Jonathan Edwards, Horace Mann, Henry Ward Beecher, and William Ellery Channing. Finally, there was the Authors' Corner with tributes to Ralph Waldo Emerson, Nathaniel Hawthorne, Washington Irving, and Henry Wadsworth Longfellow.

As part of a public relations effort by the University, civic and patriotic institutions were invited to contribute to the expense of the plaques. Organizational sponsors included such varied groups as the Colonial Dames, the American Bar Association, the Grand Army of the Republic, the National Academy of Design, the American Society of Civil Engineers, the Botanical Society of America, and the National Education Association.

The election of women has a special history, since from the beginning women could both vote and be nominated. In the first election nine women were nominated but none received the required majority votes. However, in the next two elections three were chosen in 1905 and two more in 1910. In 1914, in an effort to give women further parity, the University (which had just begun to accept women) created a separate Hall of Fame for Women. Evidently, these plans and appointments did not materialize, since eight years later, and perhaps prompted by passage of the 19th Amendment granting suffrage to women, the University Senate voted to once again have joint elections of both men and women. Altogether 11 women have been elected to the Hall of Fame, although only 10 have been commemorated by bronze likenesses: Charlotte Saunders Cushman (1915, Artists, Musicians, Actors); Harriet Beecher Stowe (1910, Authors); Maria Mitchell (1905, Scientists); Mary Lyon (1905), Alice Freeman Palmer (1920), Emma Willard (1905) (Educators); Jane Addams (1965), Susan B. Anthony (1950), Lillian D. Wald (1970), and Frances E. Willard (1915) (Humanitarians). As noted earlier, the 11th, Clara Barton, who was elected in 1976 in the humanitarian category, has yet to be commemorated by a bust portrait. Also, two African Americans have been elected: Booker T. Washington in 1945 (Educator) and George Washington Carver in 1973 (Scientist).

While less than half the persons enshrined in the Hall of Fame have been named above, one can begin to sense that their accomplishments in a variety of fields constitute an American canon, a roll call of individuals whose achievements have informed and defined our culture. Influenced by civic organizations, whose self interest can be easily documented, and with final selections determined by peer review, one could construct an argument that only the interests of the ruling elite were promoted. Yet in its time, this was an institution which encouraged the participation of the general public. Its stated goal being the creation, by national election, of an American pantheon to honor those persons whose accomplishments embodied and advanced democratic ideals.

Among the questions which remain to be asked are what lessons, if any, can be learned from a study of the Hall of Fame? Today it is an uneasy presence in the Bronx. Aside from groups of school children on field trips, there is no local or national audience for a project whose roots are deeply embedded in European culture, whose purpose contains values that are illusory for a late-20th century public, and whose sculpture exemplifies the academic ideals of an earlier generation. We are now suspicious of efforts to honor the few over the many. Yet the Hall of Fame may be useful as a way to explore current assumptions around cultural issues against the backdrop of those established during an earlier era when a similarly urgent debate took place regarding national values.

3. Postcard view of the Hall of Fame pergola, Gould Memorial Library and the Hudson River, ca. 1920.

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Kalamazoo's Memorial to Martin Luther King, Jr.

A bronze portrait figure of Dr. Martin Luther King, Jr. strides forward confidently in a small park in Kalamazoo, Michigan (figure 1). The statue, created by sculptor Lisa Reinertson, is only slightly larger than life, but its presence is monumental.

Seen from a distance, the clerical robe worn by Reverend King strengthens the tall, pyramidal composition, while the robe's flowing contours both animate the design and echo the character of this restless minister who was constantly on the march for freedom and justice.

Upon approaching the sculpture, which the viewer is drawn to do by its placement on a simple low pedestal, one sees that the robe is embellished with scenes from the civil rights struggle rendered in low relief. A black slave labors in a field near the hem of the robe, while a dark fold of the garment reveals the lynching of a man by the Ku Klux Klan. A Montgomery city bus and a portrait of Rosa Parks adorn the lower left side. The Selma to Montgomery March and King's *I Have a Dream* speech are depicted elsewhere. One also finds images of voter registration, school desegregation, the Greensboro, North Carolina lunch counter sit-in, and the use of firehoses to break up the peaceful 1963 Birmingham demonstrations. Down King's broad back the vertical folds of the cloth evolve into the bars of the Birmingham Jail with a pensive King seated behind them. Above him is the image of Mahatma Gandhi, who inspired King's use of non-violent civil disobedience (figure 2). Across the robe's shoulders the sculptor portrayed King's funeral cortege.

Despite the abundance of historical information that the sculpture contains, the work does not degenerate into triviality as do many realistic sculptures of heroes. Perhaps it is the momentous nature of each scene that prevents the piece from becoming a mundane historical narrative of the civil rights movement. Perhaps it is a combination of the sculptor's handling of the imagery, the surface textures, and the three-dimensional forms that makes this sculpture sing like a gospel choir of the trials and tribulations that King, and other civil rights activists, endured.

1. Lisa Reinertson, Dr. Martin Luther King, Jr. Memorial, *1989, bronze. Photo by Fay Wilder.*

The sculptor, Lisa Reinertson (born 1955), did not march with Dr. King, but her father did. Her portrait of the martyred leader is clearly informed by an extraordinary understanding of the man and his mission. Much of her artistic training came through her study with Robert Arneson, a California sculptor sensitive to the social and political realities of the world around him who often incised and modeled his clay surfaces with imagery related to the central subject of the piece.

Yet Reinertson's sculpture of Martin Luther King, Jr. is more than the sum of her artistic training and her inquiries into the subject. Her phenomenal portrait of a man and a movement is among the finest memorial sculptures produced in recent years. Like the best examples of commemorative portraiture, the sculpture communicates more than the mere appearance of a person. It also conveys the character of the individual and the ideals of the social movement he led. As did August Rodin in his *Victor Hugo,* Reinertson cloaked her figure with dramatic drapery and posed the magnificent head above the turmoil depicted below. As did Michelangelo in his *David,* she laid bare the soul of the man, fixing his determination in the eyes, the posture, and the powerful musculature. The monument is an appropriate reflection of the man and the struggle for civil rights that was his life's work. King wore the mantle of the movement in life and his bronze posthumous portrait is shrouded with scenes of that struggle.

Local African-American community leaders initiated efforts to memorialize King. The City of Kalamazoo sponsored the design competition and the creation of the sculpture with funding from Kalamazoo's Irving S. Gilmore Foundation and a private donor. In addition, the city established a maintenance fund to provide for the ongoing preservation of the memorial. The insight and artistry of the sculptor, coupled with the foresight of the city that commissioned the work, has given to us and to future generations an inspiring memorial to Martin Luther King, Jr. and the American civil rights movement.

—*Michael W. Panhorst*

2. Lisa Reinertson, Dr. Martin Luther King, Jr. Memorial, *detail, 1989, bronze. Photo by Fay Wilder.*

Danielle Rice

Rocky Too
The Saga of an Outdoor Sculpture

For the filming of *Rocky III* in 1982, United Artists film studios installed a bronze statue of Rocky Balboa, the boxer created and portrayed by Sylvester Stallone, at the top of the steps of the Philadelphia Museum of Art. Stallone then donated the film prop, modeled by sculptor Thomas Schomberg, to the city of Philadelphia. The actor assumed that the statue would remain in its prominent and strategically significant position, overlooking the grand Benjamin Franklin Parkway, on axis with a monument to George Washington and the statue of William Penn located atop City Hall. But after much controversy concerning its ultimate disposition, the statue was removed—at the Museum's expense—to the Spectrum, a sports arena and concert venue in South Philadelphia.

Thomas Schomberg, Rocky, 1982, bronze. View from the Philadelphia Museum of Art down the Benjamin Franklin Parkway. 1982.

Seven years later, United Artists once again requested permission to reposition the statue on the art museum steps for the filming of *Rocky V*. This time, museum authorities negotiated to have the film studio remove the statue at the studio's expense immediately after the shooting. But Sylvester Stallone held a press conference and reopened the debate regarding the proper home for the Rocky statue, claiming that he, Stallone, had single-handedly done more for Philadelphia than Benjamin Franklin. The media eagerly picked up the ball, accusing museum authorities of snobbism and casting the controversy in the predictable terms of elite culture vs. popular culture.

Although created largely out of the delight that the media seems to derive from such issues, the controversy over the Rocky statue does raise real questions about the nature of the monument in contemporary society. What should a monument of our time look like? Who gets to decide? Is an authentic artifact of a fictional hero the perfect answer? Could the Rocky monument have been transformed from self-aggrandizement and pop cult worship to a form of public art able to engage people seriously in questioning modes of authority?

It could perhaps be argued that the Rocky movies themselves constitute a popular monument more pervasive and more appropriate to today's culture than any sculpture or other form of art. The theme of the Rocky films is the wish-fulfillment fantasy of the hometown boy who achieves success through perseverance and hard work, but maintains his humility despite a number of challenges and temptations. Rocky's rigorous training includes a symbolic run from his home in the bowels of South Philadelphia, a largely working-class neighborhood, down the imposing Benjamin Franklin Parkway to the Philadelphia Museum of Art. The run climaxes at the top of the museum steps, that ultimate monument to ascendant, owning-class culture. The message of the working-class boy triumphing over the authority of the elite is thinly veiled, although it is never explicit in the movies.

During its brief moment at the top of the museum steps, the Rocky statue was acknowledged by city officials to be the second largest tourist attraction in the city after the Liberty Bell. The Liberty Bell and the Rocky monument are not as dramatically different as they may at first appear.

Both are symbols of liberty: the Liberty Bell of political freedom, and the Rocky statue of the opportunity to achieve individual success and wealth through hard work and tenacity.

Rocky is ideally suited to reinforcing the mythic vision of liberty as free enterprise, and thus it molds itself perfectly to the American dream. During the Reagan era, this ideal of self-fulfillment through hard work took on heroic proportions and became the prime justification for the free-market economic system that shaped the policies of the Reagan administration. Reagan, himself a movie star, had achieved the ultimate symbol of national success, the presidency of the United States. The discourse of the Rocky movies is entirely consistent with the mythos of the Reagan years. Like Reagan, Rocky is a small-town boy who makes good. And if a movie star can become president, why not a monument to a fictional hero who, as the real-life mayor of Philadelphia at the time Wilson Goode argued, "represents the struggle of so many people" *(Philadelphia Inquirer,* February 22, 1990).

The popularity of the Rocky movies, and their perfect fit with the ethos of the day, combined to give the debate over the placement of the Rocky statue the flavor of political controversy. But whereas in 1982 the controversy over the statue was cast primarily in terms of popular vs. elite culture, in 1989 the public brouhaha was all the more poignant. It was now seen against the backdrop of the conservative backlash against the arts brought on by the censorship of the Robert Mapplethorpe and Andres Serrano exhibitions. The aggressive actions of conservative politicians such as Senator Jesse Helms, actively seeking to curtail government funding for the arts by limiting the powers of the National Endowment for the Arts, also fueled a public outcry against the perceived esoteric nature of much contemporary art. Although Helms and his supporters supposedly attacked obscenity in art, all challenging art became suspect.

The timing of the Rocky controversy coincided with an upsurge of hostility toward the authority of the art world, symbolized by the imposing structure of the museum. Rocky atop the steps of the Philadelphia Museum of Art represented a victory for the disenfranchised outsiders of the art world over their snooty and elitist cousins. Hostility toward the hegemony of art world practices easily translates into a hostility toward oppressive authority in general, thus the self-righteous tone of many of the newspaper articles on the Rocky controversy.

Public art, specifically the contemporary practice of installing works of art in urban spaces, usually through a process that combines judging by art world "experts" with consensus-building among bureaucrats and city dwellers, has traditionally provided a forum for the airing of conflicting opinions

Editorial (right) reprinted courtesy of Rick Nichols, Editorial Board, The Philadelphia Inquirer.

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Saturday, February 17, 1990 Page 8

EDITORIALS

Rocky in bronze

That statue is beginning to grow on us; we just wish it didn't seem so small

Sometime after the first of the year, Rocky Balboa — the bronzed one — reappeared atop the Art Museum steps, proving that, well, Mike Tyson and "Buster" Douglas aren't the only boxers capable of setting tongues to wagging in this town. Of course, Rocky has been there before, posing mutely in 1982 as a prop in *Rocky III.* Then they hauled him off to South Philadelphia and a not-so-final resting place outside that temple of Jockdom, the Spectrum. He'd never have left gymside, but for the call of another movie.

Still, now that he's back up on the steps (and scheduled to be there another week), it's going to be hard to say goodbye. And not just, we point out, for Vincent Fumo, the state senator from Rocky's old jogging ground. The canny Mr. Fumo *fired off a resolution* last week urging Mr. Balboa's retention outside the museum as "a symbol of the spirit of Philadelphia" and the hopes of the common man. He is not alone. We're feeling a twinge ourselves.

Inquirer Photo / MICHAEL MALLY

We dropped by to see Rocky the other day and our first reaction was this: He doesn't exactly fit the space. From Eakins Oval, the roadway below, the palooka looks like an incredible Hulk toy that some kid lost up there on the tundra. Go look yourself. He's a shrimp against the museum's Grecian facade. Swallowed up. Weenie-ized.

They could, we suppose, cart him down to the foot of the steps. But, as museum president Robert Montgomery Scott himself opines, triumphal poses lose something at the *foot* of steps. So, that's not quite right either. (We'll concede that not everyone shares our sitting concerns. There are no shortage of Philadelphians who would dismiss the question of scale and say, "Those are the 72 steps he ran up. That's where he belongs!")

Hoo-boy. It's a hard one. Joyce McNeely of Haddonfield was staring at the 2,000-pound hunk the other day. She voted to send him back to the Spectrum "with the other jocks." Susan Kellogg of American Trolley Tours preferred the city's visitors' center at JFK Plaza. Willie Jordan, a systems analyst for the Air Force, said keep him right there: "It's marvelous sculpture," he said. "And after all, it is a museum of art."

We're not going to be drawn into what's marvelous sculpture or not. A nice woman at the museum's information desk, however, did point out that Rocky was somewhat out of proportion, heavy of thigh and long of foot. And, by golly, he *is*, on close inspection. But then looking too closely at the statuary outside the museum can get unsettling all around. Just down the steps facing City Hall is the *Washington Monument*, a 19th century affair, festooned with moose, Indian maidens, dead or moribund fish, alligators, Longhorn cattle, etc., all topped off by a mounted Gen. Washington, whose rear and that of his steed, though presumably unintentionally, are aimed squarely at Mr. Balboa. That's not getting into other statues in the vicinity, like the one of mountain lion tearing the neck flesh of an Indian pony and such gory stuff.

On the matter of gory stuff, we'll just mention in passing that behind Rocky and only a few feet from the museum's main entry, the Jacques Lipchitz interpretation of *Prometheus Strangling the Vulture* isn't for the faint of heart. The verb in the title says it all. There are *other assorted* works up there on the tundra, some shoved off to one side on wooden pallets, apparently transients like Mr. Balboa himself. One, we noticed, is of two boxers locked in what appears to be an eternal granite clutch.

They'll never attract the admirers that Rocky does. Kids from Allentown. Visitors from Washington, D.C. Grandmothers from Israel! Their fists ball up, the arms stretch skyward. Click. Rocky's more than a symbol for Philadelphians. He's an international photo opportunity. *And, Lord knows, the Liberty Bell* shouldn't be the only show in town.

Oh, some people get technical. They say if this is where Rocky ran, he should be wearing a sweatsuit. Or they say he's not commemorating a real event, or a *significant* event (though they don't go on to explain the significance of a lion tearing neck flesh). They say his appeal is limited. "It would be like putting a statue of a sewing machine out there," said the info woman. "Maybe the garment workers would like it . . . "

But they don't get it, do they? They don't get that Rocky *is* significant; that any guy who can start by working out on sides of beef in this town, win fame and fortune and still hold on to his roots is significant. They don't get the meaning of a legend — or of a Pop Icon; the thrill of having a celebrity bronzed and frozen, ever-ready to oblige the family shutterbug. They don't understand about underdogs and guts and glory. They don't, in a word, get Philadelphia.

Smite us, if you must, you art purists. But if Rocky Balboa didn't seem so shrunken and lost at the top of those steps, so alone, and so diminished, by God, we'd be tempted to say right along with Sen. Fumo: Give the guy a longer count.

Thomas Schomberg, Rocky, *1982, bronze. View of the statue atop the steps of the Philadelphia Museum of Art. Photo by the author, 1990.*

about the nature and role of art. The controversy over the Rocky statue highlights the failure of communication between the practitioners and experts of the art world and the diverse inhabitants of urban environments. But it also reveals the active—and to a great degree unstudied—role of the media in mythicizing and representing so-called public opinion. It is not coincidental that this media-created controversy ensued in this particular political climate at this particular moment. Under the banner celebrating mass culture over elite culture, strong individuals tried to bypass well-established, democratic review procedures either for reasons of personal aggrandizement, as in Stallone's case, or for political ones, as in the case of Senator Helms.

Like the Reagan era itself, the Rocky controversy ended with a whimper rather than a bang. To fend off the media attack, museum spokespeople had begun by arguing in favor of removing the statue from the museum steps because it was not a real work of art but merely a movie prop. But they soon abandoned this line of argument because of the difficulty of coming up with a clear-cut definition of art that could exclude the statue. Stallone's lawyers, who had begun by arguing the legitimacy of the sculpture as art, did a sudden about-face when they discovered that the Philadelphia Art Commission, and not the museum, is ultimately responsible for the disposition of public art in the City of Philadelphia. In claiming that the statue was not art, Stallone's lawyers hoped to keep the decision as to its ultimate disposition out of the hands of the Art Commission and in the hands of city officials eager to capitalize on the statue's popularity with tourists. In the end, the Art Commission considered a number of possible sites for the statue. However, because the piece had already been removed to the Spectrum, and substantial funds were required for the transfer of the 1,500-pound bronze, the Rocky monument remains at the sports arena. As a concession to tourism, the city installed a concrete plate with "Rocky's footprints" at the top of the museum steps, in the place previously occupied by the much-debated monument.

Danielle Rice is Curator of Education at the Philadelphia Museum of Art. She has published a number of articles in Museum News *and* The Journal of Aesthetic Education *on the plight of the public in the museum setting.*

Cartoon courtesy of Tony Auth, The Philadelphia Inquirer.

Richard H. Putney

Bringing Monuments to Life at Gettysburg

State and national parks, museums, historical sites, and similar types of cultural resources often complement the programs of educational institutions. Such was certainly the case with an undergraduate, interdisciplinary course given at The University of Toledo in the spring of 1994. *Hallowed Ground: Monuments, Memory and the American Civil War* was devoted to historic and artistic aspects of monuments erected on Civil War battlefields during the late-19th century. Taught by sculptor Thomas Lingeman and art historian Richard Putney, the course employed an unusual methodology. Assuming historical roles, students acted as committees of artists and veterans working in the late-19th century and designed monuments dedicated to regiments that fought in the battle of Gettysburg, July 1-3, 1863.

1. Park Ranger Scott Hartwig, Gettysburg National Military Park, lecturing to the course participants beside the monument to the 69th Pennsylvania Volunteers. Photo by the author.

Even though neither instructor had formal education or teaching experience in Civil War history, we both shared a long interest in the sculptures at Gettysburg. I had been systematically photographing the battlefield monuments, while Tom had been examining the materials and techniques used to create them with the well-trained eye of the sculptor. We realized the vast educational potential that the Gettysburg site and its works of art offered, and gradually formed a plan for an interdisciplinary course on Civil War monuments. The course would emphasize experiences that would allow course participants to appreciate fully the significance and impact of the monuments.

The course curriculum had two major segments. The first focused on motivating students through their learning the basic history of the Civil War and its memorials. In the second segment, students would design monuments for the Gettysburg site. A class trip to Gettysburg would be the all-important bridge between the two segments, helping the students synthesize the information from the first part of the course, and inspiring them in the design phase awaiting them in the second.

We opened the course with a series of carefully selected reading assignments, classroom discussions and field trips to pertinent local historic sites. Reading assignments included Michael Shaara's *The Killer Angels* and Shelby Foote's *The Stars in Their Courses*. Both works—one a novel and the other a more conventional work of history—are excellent introductions to the battle. Slides of the Gettysburg battlefield accompanied class discussion of the readings, and the students were able to examine Civil War weapons and artifacts on loan from a local collector.

We concluded the first segment of the course by turning from the history of the battle of Gettysburg to Americans' memories and interpretations of it. We read Garry Wills' Pulitzer Prize winning book, *Lincoln at Gettysburg*, and complemented our discussions of remembrance and the war's commemoration with on-site studies of local monuments, 19th-century cemeteries, and the site of a camp for Confederate prisoners of war.

By now, the students were immersed in the Battle of Gettysburg and its significance, the ethos of 19th-century memorials, orations and funerary customs, and provided us with an understanding of the relationship between funerary monuments in general, and those dedicated to the Civil War in particular. Next came the first-hand study of the Gettysburg site.

Our four-day visit in late April created vivid images focusing on the evocative relationships of

2. Student Michael Dorn examines the monument to the 20th Maine Regiment on Little Round Top at Gettysburg National Military Park. Photo by the author.

monuments and landscape in the national military park. Driving through the dying light of sunset one evening, for example, we parked near the top of Little Round Top; we climbed its eastern slope, passed over its crest and approached the bronze statue of General Gouverneur K. Warren. Sharing his high vantage point, we took in a landscape of rolling ridges cut by the dark lines of trees; because of the dramatic placement of Warren's statue, it was easy to imagine what he had seen during the battle. Indeed, the abstraction of a battlefield map—its topography reduced to contour lines and its regiments of soldiers to rectangles—took on a more immediate meaning which was impossible to forget. It was also clear why it had been so important to recall the memory of Warren's foresight and decisiveness with a well-placed monument.

One morning a group of us entered the National Cemetery. Standing in the dew-drenched grass, we admired the yellow light of daybreak illuminating row upon row of marble slabs; here and there, black metal tablets carried sentimental inscriptions, their forms casting long shadows in the raking light of dawn. All of us felt a marvelous sense of serenity, but also the irony of such an emotion in a place once scarred by gruesome sacrifice.

3. Student Kelly Asadorian opens the mold of the 20th Maine Monument. Photo by the author.

Later that day, we followed the eroded, meandering line of some old trenches on the wooded and gently sloping ridge of Culp's Hill; moving up the hill we passed monument after monument. Under the trees at the side of the park road, we came upon a handsome one dedicated to the 123rd New York Infantry; at its summit the granite image of a woman in classical garb sat at ease in the dappled light. Bearing silent witness, she inscribed upon a tablet invisible words meant to live forever; somehow we felt we knew the importance of her words, we understood them. Our readings, our discussions and, above all, our immediate experiences on the site had allowed us to see this landscape through the eyes of the previous century: trees, hills, plowed fields, farmhouses and barns, rail fences, fieldstone walls, slabs of granite, metal tablets, cannon, figures of bronze, inscriptions. "Look," these things seemed to tell us, "read our words and remember!"

A lecture by park ranger Scott Hartwig on Cemetery Ridge added to an already memorable visit to the park (figure 1). He led us a few hundred feet to a modest granite obelisk erected in honor of the 69th Pennsylvania Volunteers, a Philadelphia unit which had suffered the brunt of Pickett's Charge on July 3, 1863. Before he spoke, Scott positioned our group so we looked out over a low stone wall—marking the regiment's only substantial line of defense—to the broad, open fields crossed by the Confederate infantrymen in their final assault. In this setting it was easy to imagine the fearful culmination of the battle. Scott related aspects of the regiment's formation—the working-

4. The monument designed and fabricated by students of the Joshua Chamberlain / 20th Maine group. Photo by Kathleen Brown.

5. The monument designed and fabricated by students of the 69th Pennsylvania group. Photo by the author.

class background of the Irishmen who composed the unit, their induction into uniform, their less than glorious departure from the City of Brotherly Love—and then focused on their fearful experiences on July 3. Scott's account was inspiring, at times grisly, and impossible to forget.

Students also communed individually with monuments that appealed to them. Each was asked to explore a favorite portion of the battlefield and write general descriptions of at least three monuments, recording their inscriptions and sketching their images in a course journal. That portion of our work complete, we were ready to return home.

Upon our return to Toledo, Tom's sculpture studio became our second home. The class divided into three design groups and each chose a regiment that had played a significant role in the battle. Not surprisingly, one group chose to memorialize the 69th Pennsylvania, whose dramatic engagement on Cemetery Ridge had been conveyed so effectively by Scott Hartwig. Another chose the 6th Wisconsin Volunteers, whose successful charge against Confederates sheltered in a railroad cut was an isolated Union triumph during the first day of battle. The third group selected the 20th Maine Volunteers, a unit that played a momentous role during the second day of the battle and was described vividly in *The Killer Angels*. In choosing the 20th Maine Volunteers, the students said that the men led so heroically by Joshua Chamberlain deserved a more fitting monument than the one they had seen on the south slope of Little Round Top (figure 2). In assuming historic roles, of course, the members of each group had to imagine not only that they were working in the 19th century, but also that the monument which today represents their unit at Gettysburg had not yet been designed or erected.

6. The monument designed and fabricated by students of the 6th Wisconsin group. Photo by the author.

The design groups were to honor their units with monuments conforming to the rules formulated in 1888 by the Gettysburg Battlefield Memorial Association. These rules specified acceptable construction materials, the key information that inscriptions should include, and the process for securing permission to place a monument. During the last seven weeks of the course, each group created its monument on paper, and then produced a bronze maquette (figure 3). They fabricated a three-dimensional prototype in wax, surrounded it with a ceramic shell mold, burned away the wax original, and filled the mold with a cascade of molten bronze. Once opened, the mold yielded a roughly-surfaced bronze version of the group's prototype, which the student sculptors then had to clean, finish and patinate. And all of this was accomplished by a class that had only a few students with any experience in bronze casting.

In addition to fabricating the maquettes, each group prepared a topographic plan to site its monument on the battlefield, wrote a dedication speech in a rhetorical style appropriate to the 19th century, and produced other written materials related to its project. One group wrote letters home from a fictitious member of its unit, another wrote a short regimental history, and the third produced an illustrated artist's journal that had for its inspiration the sketches of such Civil War artists as Alfred Waud and Winslow Homer.

Appropriately, the course ended with dedication ceremonies. Each group unveiled its monument and had a member read its dedication speech; the magisterial figure of Joshua Chamberlain crowned the work dedicated to the 20th Maine (figure 4); the 69th Pennsylvania presented an impressive minié ball capped with a gallant flag bearer (figure 5); and three infantrymen formed the monument to the 6th Wisconsin (figure 6). Their labor complete, the students returned to the 20th century and shared a well-deserved banquet.

No teacher could have asked for more than what these students gave, working literally night and day to bring their designs to life. And inspiring them were those compelling objects of granite and bronze, formed by memory, that inhabit the haunting landscape of Gettysburg.

Richard H. Putney is Director of Art History at the University of Toledo.

Susan Nichols

SOS! Where Are We Now and Where Are We Going?

On rollerblades, volunteer Florissa Colina covers more ground when surveying sculpture with Tampa SOS! Photo courtesy of Marianne Eggler-Gerozissis.

Save Outdoor Sculpture!, known best as SOS!, was established in 1989 under the joint sponsorship of the National Museum of American Art, Smithsonian Institution, and the National Institute for the Conservation of Cultural Property. The project's two goals are to inventory all publicly accessible outdoor sculpture in the United States and to raise public awareness about the need to provide professional treatment and routine maintenance of artworks in their communities. During the first five years of its existence, SOS! has accomplished much.

New York SOS! volunteer David Grotke, featured in American Motorcyclist *(August 1994), surveyed 20 works on his Honda Shadow 85. Photo courtesy of Billie Ingersoll.*

More than 200 organizations and thousands of volunteers have joined in SOS! in 106 projects nationwide. History and art groups, universities and civic clubs from the private and public sectors have signed on to coordinate SOS! locally. Volunteers were recruited from within their organizations' ranks as well as the general public. They have included a tie store manager, potato chip sales representatives, and retired people, including one couple in their 70s and 80s. Girl Scouts in Alaska and Georgia are fulfilling requirements for their Gold Star Badges by participating in SOS! As affiliate volunteers, a class of sixth graders in Georgia wrote articles for their weekly county newspaper about 20 works they located, researched, and photographed themselves. Working alongside community residents, Urban Corps members, ages 18 through 25, completed surveys for San Diego SOS! The Seattle Art Commission, as part of its SOS! obligation, conducted workshops with residents whose neighborhood sculptures were victims of gang and drug-related vandalism. Students and young adults are an important part of long-term plans for care of outdoor sculpture. Student participation in a fundraising campaign to restore professionally a statue in a town's downtown library park and to police the area for litter could be the best civics lesson possible. In the blink of an eye, as policy makers and voters, they will be responsible for our cultural resources.

To date, SOS! has yielded impressive results. Of the 106 SOS! project sites, 23 have completed their work; surveys for the balance should be wrapped up by late 1996. Only Louisiana remains without an SOS! survey effort, although New Orleans has been completed. All data are added to the Inventory of American Sculpture (IAS), which already contains more than 50,000 records of both indoor and outdoor sculptures. An additional

Luciani Nelson, Senior Girl Scout, Troop 210, achieved her Gold Award by surveying 10 works for Georgia SOS!. Photo courtesy of Betty Jones.

15,000 report forms of outdoor sculpture have been received from SOS! volunteers and, once thoroughly cross-checked, will be added to the database.

The Inventory has been used by the obvious audiences of scholars, conservators, curators and picture researchers, as well as by the less obvious—artists' descendants, filmmakers and authors writ-

ing on trolley cars and philosophy, and developing teaching materials in conjunction with the 1996 Summer Olympics. Conservators have searched the database for information about examples of patina used by Thomas Crawford and maintenance of fiberglass works by Luis Jimenez, lists of concrete works by Arnaldo Pomodoro, and all zinc sculptures. Early in 1995, the Inventory will be accessible through the Internet; now inquirers may visit, write, or telephone to 202-786-2384.

Dora Timmerman, co-coordinator, Wichita SOS!, piloted a sculpture appreciation program consisting of walking tours, slide shows and visits from a sculptor for 80 fifth grade students. The unit culminated with students unveiling their own works on the school grounds. Photo courtesy Wichita SOS!.

The database is most useful when kept current. In the long-term, people who make, commission, or treat outdoor sculpture will be expected to provide the Inventory staff with updates and will be reminded of that obligation through their professional journals. The Maine Arts Commission will require artists to submit an SOS! survey form when installing new works. Others who are likely candidates to be helpful with local efforts to underwrite professional care—service clubs, veterans posts and special interest groups, for example—will be reached through their national organizations and popular and club publications.

Nearly three-quarters of a million dollars of cash and in-kind support have been contributed for support of local projects and treatment of sculptures during SOS! In Austin, Texas, Holleman Photographic Labs contributed processing for *all* project film. Cleveland photographers Frances and Robert Waltz donated time and services to create an exhibition about deteriorated works in the city which was featured in a full-color newspaper insert. In addition to donations of goods from hardware stores, grocery stores and banks, foundations and art councils have awarded grants for supplies, brochures, walking tours, classroom curricula, symposia, and roundtables. At the national level, TimeWarner, Inc. provided 4,000 copies of videotapes and York Photo Labs Inc., contributed 500 film processing envelopes.

The Texas Historical Commission, which sponsored Texas SOS!, snared a $250,000 grant from the state's Department of Transportation to conserve and maintain 10 sculptures. "Thanks to ISTEA, the mega-highway bill, our frustration and occasional heartache due to inadequate funds for professional conservation and maintenance is set aside for now," notes Hillary Summers, Project Coordinator for Texas SOS!

"Our highly successful and well-publicized SOS! survey in Texas paved the way to implement Texas SOS!, Phase II, which will specifically address conservation and maintenance issues identified in Phase I," Summers justifiably boasts. "Although our SOS! Incentive Award could not be used for treatment or maintenance, it helped with related costs, freeing up money to be applied to our match. The endorsement of a nationally-recognized program like SOS! lent credibility and enhanced our applications. For instance, from the Texas Commission on the Arts, we received another $2,100 toward our match requirement."

Texas SOS!, Phase II, plans a fully-integrated program that includes much more than merely conservation work. As part of the State Preservation Office, Texas SOS! has long-range plans to establish a responsible and integrated conservation program that will be a model for others, to spur local media attention, to initiate or strengthen existing adopt-a-monument programs, and to continue to educate and raise public awareness in communities throughout the state. The Texas Historical Commission staff also plans to produce an instructional videotape and technical handbook.

An article about Vermont SOS! in the Rutland *Herald* caught the attention of State Senator Vince Illuzi, a man with roots in the granite carving business. "Thanks to Illuzi's efforts," notes Ann Lawless, Project Coordinator, Vermont SOS!, "the 1993 legislature allocated $5,000 to fund restoration of the state's outdoor sculpture and their bases, many of which are granite." The state's contribution was supplemented by awards from SOS! and the Vermont Division for Historic Preservation. In addition, Vermont SOS! received the Governor's Award for Community Service in 1993.

Due to SOS!, damaged and neglected sculpture have received increased visibility, resulting in start-up adopt-a-sculpture efforts in Cleveland and Milwaukee and heightened interest in existing programs in New York City, San Francisco, Boston, Chicago, and Dallas. Further, Arizona is investigating a statewide program; Massachusetts SOS! has received state lottery contributions of between $250 and $500 from 23 towns; the Atlanta Track Club

pledged $10,000 toward restoration of the *Peace Monument,* located at the finish point for its annual 10K race; Denver Parks and Recreation received $29,000 from limited gaming to treat *Children's Fountain;* and the City of Toledo allocated $170,000 for the treatment of 17 artworks.

Also in Ohio, $80,000 in state arts funding was awarded to SOS! projects. In addition, the Ohio Arts Council amended its guidelines to permit requests for conservation and education efforts. Awards have included funding for curriculum development incorporating outdoor sculpture, historical monuments, conservation issues, and other SOS! issues and interests in the classroom. One outcome of this support has been production of the highly acclaimed, bouncy video geared to elementary students, "I Am A Sculptor," from Toledo SOS! with a complementary teacher resource guide including lesson plans for use statewide.

The SOS! Fund-Raising Kit collects creative fund-raising tips in four formats, two VHS-videotapes (30 min. and 10 min.), booklet (40 pp.)and planning guide (14 panels). Fee $7.00. Photo by Gene Young.

Florida SOS! volunteers took the plunge to survey Christ of the Deep *by Guido Galletti. The 9' bronze is located 3.5 miles offshore at Key Largo, amidst a coral reef, a popular site for divers and snorklers. Photo courtesy of Richard Lemack.*

Educators, students, conservators, and sculptors were involved in development of *Public Sculpture: America's Legacy,* a multimedia educational packet with video and study guide for middle and high school students. Developed as part of its National Arts and Humanities Education Program by the SOS! co-sponsor, National Museum of American Art, the packet offers teachers and students a look at what outdoor sculpture is and how it commemorates history. The kit is distributed by Crystal Productions, 800-255-8629.

Expanded and additional examples of local and statewide efforts to raise funds to underwrite professional care of outdoor sculpture are central to any long-term impact of SOS! To support those initiatives, the SOS! Fund-Raising Kit was developed to assist enterprising individuals and businesses, grass roots organizations, service clubs with local and national agenda, and municipal and statewide agencies in their efforts to underwrite costs of professional treatment of outdoor sculpture. The fund-raising kit is part of the training materials developed for a national workshop series, "The Preservation of Outdoor Sculpture and Monuments," jointly sponsored by SOS! and the National Park Service, Mid-Atlantic Region, to be held from March through November 1995. In addition to fund raising, the workshops focus on planning and contracting for care of outdoor works.

For additional information about SOS!, call 800-422-4612.

Susan Nichols is Director of the Save Outdoor Sculpture! program at the National Institute for the Conservation of Cultural Property, Washington, DC. She served as a guest editor of this issue of CRM.

Sculpture Inventories Around the World

Charles Summers, Burke and Willis Monument, 1965. With a client base that is interested in heritage, an investment company, Over 50's Friendly Society, covered the cost of treatment and reinstallation of this monument to Australian heroes. Photo by Susan Nichols.

Since Save Outdoor Sculpture!, nicknamed SOS!, was initiated in 1989 in the United States, comparable efforts have begun in Argentina, Australia, and Great Britain. Other serious queries about applying the SOS! model to their own national collections of outdoor sculpture have come from Switzerland and the Philippines where, in preparation for their country's centennial, Filipinos are planning an inventory and guidebook of the outdoor sculpture on their 7,000 islands.

As other countries catalogue their monuments and public sculpture, report on their treatment and maintenance efforts, and provide ready-access to computerized records, the prospects of applications for research, study, and general information are intriguing and awesome. Accounts of sculpture-related issues and responses in Australia, Argentina, Finland, and Great Britain provided here remind us that despite language and distance common concerns of preservation for cultural property shows us just how much we can learn from each other.

—Susan Nichols, Director, SOS!

In Australia ...

Olga Cohen, Faeries Tree, *1931-34, carved wood, Melbourne. Twenty native birds and animals are carved on this acid gum tree and its hollows. Photo by Susan Nichols.*

Sculpture, Monuments and Outdoor Cultural Materials (SMOCM) is a special interest group of the Australian Institute for Conservation of Cultural Material. In March 1994, with the conservation group Artlab Australia, SMOCM helped organize the conference, "Visions for the Future." In Adelaide, Sydney, Canberra, and Melbourne, as guest of the conference organizers, Susan Nichols, Director, Save Outdoor Sculpture!, spoke about the American SOS! project and assisted with plans to adapt the U.S. model to Australia.

Photographing William Bede Dalley Monument *for Sydney's Open Museum Inventory. Photo by Graham Monro.*

Like the American SOS! program, the Australian inventory will rely largely on volunteer help to be successful. Already there is much enthusiasm for the project, so Australians are optimistic that they can create a powerful ground swell to fulfill the vision of the Australian Heritage Commission: "A future in which the National Estate is known, valued and cared for, by all Australians."

—Donna Midwinter, Conservator, Art Gallery of New South Wales, Sydney, and Coordinator, SMOCM

Sydney's Open Museum

In 1991, Sydney's City Council declared the city to be an Open Museum and funded an inventory of outdoor sculpture under its care. As elsewhere, Sydney's outdoor sculpture collection provides a picture of its history through artworks such as bronze statues of key figures from Australian colonial history—monarchs, explorers, and politicians—fountains, war memorials, and contemporary abstracts. In Sydney's case, the collection also includes a few historically-significant objects such as the anchor and cannon from the *HMS Sirius*, the First Fleet flagship. These artworks have endured decades of neglect and, more recently, the destructive effects of society's complex environment, namely, acid rain, vehicle emissions, salt contamination, pigeon droppings, acts of vandalism, and accidents.

Following the completion of the inventory, two major surveys were commissioned: a collection-wide conservation assessment with recommendations for further condition reports and conservation treatment on a priority basis; and a research survey of the provenance and historical background of each item. In the development of the briefs for the commissions, the SOS! survey questionnaire was extremely useful as a working model for the range of information and details that the consultants were required to provide.

From the information provided by these surveys, a five-year management plan for the maintenance and conservation of the Open Museum is now being established. While Council currently funds the cost of maintenance and conservation work, a sponsorship scheme similar to the Adopt-A-Monument program in the United States is being initiated. At the same time, public awareness of Sydney's outdoor cultural heritage is being raised through publications, walking tours, and a database to be located in the city's library and accessible to the general public.

John Robinson, The Hammer Thrower, *1974, Melbourne.*

Photo courtesy the Cultural Development and City Promotions Branch, City of Melbourne.

At this stage, the Open Museum consists only of outdoor works that are the responsibility of Sydney City Council, by no means all the works located within the city. With Sydney 2000 around the corner and the worldwide visibility of those Olympic games, some Sydneysiders are optimistic that the scope of the Open Museum as well as the professional care of collections may be enlarged.

—Sally Couacaud, Visual Arts Officer, Sydney City Council

Melbourne's Corporate Conservation Sponsorship

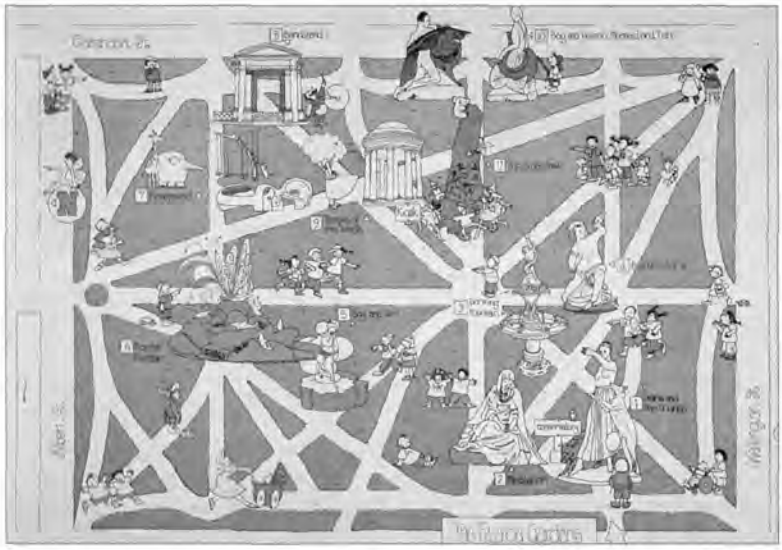
Since 1988, through a capital works program, the City of Melbourne has committed approximately $AUS 100,000 per annum to a conservation program for its artworks. To augment city funding, city council investigated the option of corporate sponsorship and in 1993 created a city-managed tax incentive program for corporate contributions.

Over the next five years, the City of Melbourne will continue to contribute $AUS 90,000 per annum and attempt to raise a matching $AUS 90,000 through corporate sponsorship. This amount should ensure that all works under the care of the city are conserved, a maintenance program set in place, and public programs developed. The issue of continued maintenance beyond five years is yet to be addressed.

Australia has very few models for sponsorship. New York City's Adopt-A-Monument program was a useful guide in developing Melbourne's sponsorship package. This package outlines the entire program and provides descriptions and cost estimates for the conservation of a number of works. Also included is a videotape emphasizing the importance of conservation by looking at Melbourne's unique heritage and the need for immediate action to preserve these cultural objects for future generations. Written in laymen's language, this videotape hopefully will educate potential sponsors in the very specialized field of conservation.

Based on existing condition reports, a prioritized list of conservation needs was developed. Added to the cost of treatment was an allowance for interpretive signs, five-year maintenance, promotion, and any necessary landscaping or associated site works. The aim is to attract sponsors to support an entire project with benefits including tax concessions and credit on signs, media releases, and any brochures produced.

On reflection, the Melbourne approach to the corporate sector has not been as successful as anticipated. To date, there has been only one commitment of $AUS 11,500 for maintenance, promotion, and signs for the *Burke and Wills Monument* by the Over 50's Friendly Society, an investment company catering to people who are in the over-50s age group. The society recently moved to Melbourne and saw the importance of the program



Stalk a Statue, *map of Fitzroy Gardens, Melbourne, helps to guide families along an outdoor sculpture discovery trail.*

to its own promotion and client base who has a strong interest in heritage.

Clearly, future success will depend on linking monuments with particular companies either by their location or their area of business. In addition, more corporate interest and, hopefully, financial support will be generated through increased use of the media.

Meanwhile, the original strategy of sponsorship is being reviewed. To date, we have learned a number of things. A corporate component of a special program requires the support of key businessmen to make contacts. There needs to be more time given to educating all potential sponsors. It is essential to involve the community—not just the corporate sector in such a program.

—Kathy Peters, Program Manager, City Collection & Heritage, Melbourne

In Argentina ...

Many cities in Argentina have extensive collections of outdoor sculpture. Buenos Aires is estimated to have more than 300 pieces and Mar del Plata approximately 100 artworks. Many of these works are commemorative monuments to war heroes, historical figures important in the development of Argentina and local folk heroes. In 1993, as part of a series of workshops about preventive conservation held in Argentina, I described the American SOS! program, hoping to stimulate local interest in developing an Argentina SOS!

Marble statue of Venus de Milo in Mar Del Plata being examined by staff from the Mitre Museum. Because it is so accessible to the public, it is repeatedly vandalized. Rajer spent hours with the museum staff viewing slides of similar graffiti and other vandalism problems on public monuments in North America.

During two weeks in Mar del Plata, I worked with museum staff of the Mitre Museum to initiate a comparable SOS! program. Eventually two of the conservation staff at the Mitre Museum will be charged with caring for and maintaining the public sculpture.

The situation in Buenos Aires is quite different. Many pieces of public sculpture in the city have been cared for over the years, some better than others. In general, the city's public art collection, especially in the large parks and boulevards, is in good shape. However, the smaller and remote parks of the city show quite a bit of vandalism and damage. City administrators charged with the care of public sculpture and private cultural foundations were receptive to my presentations about SOS!, particularly to SOS! methods of inventory and condition assessment.

Fountain of the Nereids *(detail) in Buenos Aires by Argentine artist Lola Mora; white carrara marble, 1903. High levels of pollution, proximity to the sea, and vibrations from trucks on a nearby boulevard all contribute to severe conservation problems. With support from the SUR Foundation, a condition assessment is underway to recommend ways to conserve this important work of art.*

In the future, I will continue working with officials, museum staff, and interested citizens in both Buenos Aires and Mar del Plata to further the development of the SOS! program in Argentina. I feel confident that both cities will continue on the current course with SOS!, Latin style.

—Tony Rajer, Art Conservator, Madison, Wisconsin

In Finland ...

In 1989, the Association of Finnish Sculptors invited artists, foundry staff, art historians, corrosion scientists, museum administrators, and conservators to discuss problems of outdoor bronze sculptures. The discussion revealed that the main problems of outdoor bronze sculpture in Finland are first of all the care of modern sculptures and second the conservation of historical ones. It also recognized that there is ample need for the development of improved casting techniques and alloys for contemporary sculptures. Since outdoor bronze sculptures had not been earlier investigated, a small research program was initiated.

Named "The Bronze Group" and subdivided into research and field study, members contacted international institutes, museums, and private conservators. Information received about the SOS! project in the United States was of great help. The research program searched the literature, worldwide, regarding cleaning, protection, and research methods of outdoor bronze sculptures; the advantages and disadvantages of these methods were also recorded.

For the field survey, 15 bronze sculptures in Helsinki were chosen, representing various ages—turn of the century, the time between the two world wars, the years just after World War II, and today—and different micro-climates—near the sea, inland, polluted and unpolluted surroundings. Although no differences in the quality could be identified between sand and lost-wax casts, comparisons of sculptures produced with sand-casting techniques showed marked differences in the porosity of the cast. Unexpectedly, the pedestals were in poor condition.

In its final report, The Bronze Group identified the need to be fully aware of how sculptures, their materials and structures, react with the environment. Conservators considered it very important that museum administrators and conservators agree on a common policy of the maintenance and conservation of outdoor sculptures. Unfortunately, resources to implement this kind of education are very limited due to inadequate financial support. Even the limited work of The Bronze Group has been suspended.

In Finland, almost all outdoor sculptures are part of the collections of city art museums. The city engineers' offices are responsible for the assembly of the sculptures including the foundations and pedestals. Traditionally, the municipal park departments take care of the maintenance. None of these offices has sculpture conservators in their service.

In 1990, as a result of the work of The Bronze Group, Helsinki initiated a two-week program to develop a special sculpture maintenance group. Employees from the city's park department were selected to participate in the course and that group has been responsible for the maintenance of outdoor bronze sculptures in the city. Their training course introduced the meaning of public art, showed the causes and results of deterioration, and demonstrated techniques to maintain sculptures.

The intention was that the maintenance work should be based on a condition survey covering all public sculptures in the city area. This survey, as well as necessary conservation interventions, were to be carried out by a private sculpture conservator. However, again because of economics, the condition survey has been delayed. The maintenance group is mostly working with other tasks and can only do pilot work like removing graffiti. The City of Helsinki is also reorganizing its administration and for the time being it is unknown if the responsibility of the maintenance will be handed to the art museum.

—Lena Wikstrom, Conservator, Helsinki, Finland

In Great Britain ...

During the last five years, the recording of British public monuments and sculpture has made rapid progress and the next five promise to be equally exciting. In 1989, the Loverhulme Trust funded a five-year survey of British war memorials. The aim was to create a database and archive which would be of interest to a wide range of users, primarily art historians, military historians, conservators, and family historians.

Gilbert Bayes, World War I Memorial, detail, marble, Hythe, Kent Co., England.

The first step involved organizing field work and designing a form for volunteer recorders to complete. Similar to the SOS! Survey Questionnaire, the British form needed to accommodate church monuments, buildings, plaques, crosses, obelisks, and cenotaphs, as well as public statuary. Organizations approached to help recruit recorders included local councils, family history societies, local historians, as well as numerous other voluntary associations. County archivists, local studies librarians, and veterans' associations offered to co-ordinate research in their area, while elsewhere individuals, including veterans, contacted our London office to volunteer.

In the first few months, thousands of forms were dispatched to every corner of the country. Gradually the returns began to arrive, either one by one or neatly parceled by the hundred. Maintaining accurate lists of recording activity in each area and cataloguing returns proved to be an enormous task, along with designing the database system, writing articles, and giving lectures to publicize the project. The Inventory now includes records of over 15,000 war memorials, and the chief aim during the next 12 months is to log all reports on the database.

All along, the Inventory has met with great enthusiasm, since the lack of any centralized record, even as basic as the locations of memorials, had long been a huge problem for researchers. As work with the survey of war memorials progressed, it became obvious that a similar survey of all types of public monuments was required. This became the primary aim of the Public Monuments and Sculpture Association (PMSA), formed in 1991.

A National Recording Committee was then established to begin work on the cataloguing project. What was to be recorded, how, by whom, and when were key issues, as well as the all-important issue of funding. The intention is to establish approximately 10 regional archive centers in key bases across the country, each staffed by two full-time researchers to co-ordinate volunteer activity in their areas.

Last year, in Liverpool, a pilot study was conducted to test the feasibility of undertaking the survey nationwide. A full-time researcher was employed by the University of Leicester and the National Museum and Galleries on Merseyside to compile a survey of Liverpool's public monuments. Now complete, the Liverpool survey will be published as a book; a CD-ROM version is planned. Meanwhile, a fund raiser is to be appointed, charged to secure the thousand pounds needed to make further progress.

While a great deal of cataloguing remains to be done before the National Inventory of War Memorials is fully accessible on database, the reports, currently filed geographically, have already attracted much interest. It is now possible to map the work of particular sculptors across the country. The amount of supporting documentation in many reports—minutes of commissioning committees, copies of local newspaper unveiling ceremony reports, contemporary postcards—provides an enthralling view of the motives and organization behind monuments and the complications and dilemmas of particular commissions, as well as the impact of these objects on their communities.

—Catherine Moriarty, Research Co-ordinator, The National Inventory of War Memorials, Imperial War Museum, London.

Susan I. Sherwood

Kitson *Hikers* Capture a Half-Century of Corrosion History

1. T.A.R. Kitson, Hiker, 1942, Portsmouth, Virginia. Photo by Dennis Montagna.

Some soldiers never stop serving their country. Spanish-American War soldiers fought bravely in Puerto Rico, Cuba, Guam, and the Philippines in the 1890s. Across America statues commemorating their deeds and sacrifice have stood watch in the soldiers' hometowns since the 1920s. These monuments also record the growth of a nation in their corrosion patterns.

2. Applying Permagum Impression Material to the gunsight of the Hiker in West Palm Beach, Florida. Photo by Heidi Boise.

Many different artists were commissioned to design monuments commemorating the Spanish-American War veterans, who were nicknamed "hikers" (like the World War I "dough boys" and the World War II "G.I.'s"). One of these designs, by Theodora Alice Ruggles Kitson, was selected by more than 50 cities and towns across the country (figure 1). Casting multiple copies of the same statue was not uncommon; replicas of Rodin and Remington sculptures abound. There are many examples of two and three copies of the same outdoor monument made for locations tied by a common event or individual, for example a regiment's home town and their position on the battlefield or a statesman's home town and capital city.

The large number of copies in the Kitson *Hiker* series is very unusual. The first Kitson *Hiker* was dedicated at the University of Minnesota in 1906. Later, the artist sold the copyright for the statue to the Gorham Foundry in Providence, Rhode Island in exchange for raw material to cast new pieces. Between 1921 and 1965, Gorham produced about 50 replicas of the Kitson *Hiker*.

3. Molds were taken of the semi-cylinder below the front gunsight using ESPE Permagum Elastomeric Vinyl Polysiloxane Impression Material, developed for taking dental impressions. This is a two-part putty that consists of a base paste and a catalyst that, when kneaded together, form a putty that replicates complex surface textures. The putty sets up into a rubbery state in two to five minutes and remains pliable enough for easy removal. Because the material was formulated to work best at body temperature, it does not set up well below 60°F. Photos by D. Montagna.

Most of the early Kitson *Hiker* statues from the 1920s and '30s are located in the Northeast (see figure 4). In the '40s and '50s, Kitson *Hikers* were also dedicated in the South and West. In 1965, the last replica of the Kitson *Hiker* was erected near Arlington Cemetery in George Washington Memorial Parkway to commemorate Spanish American War veterans across the nation. One-third of all the Kitson *Hikers* are found in Massachusetts, mostly in the greater Boston area, most probably reflecting Gorham's marketing practices. *Hikers* are found in cemeteries, in parks, on college campuses, in front of City Halls, and in traffic islands. Some stand on boulders close to the ground; others stand on high pedestals.

With this wide range of geography, age, and setting, while keeping constant the variables of fabricator, alloy, and shape, the Kitson *Hikers* serve as standard corrosion samples to help scientists better understand the influences of weather and pollution on bronze statue corrosion. All metals corrode in the presence of moisture and acid. Because bronze is one of the most durable metals, it often is the material of choice for harsh environments, such as marine fittings, and long-term uses, such as outdoor statuary. When metals are exposed to the atmosphere, they form corrosion products, which can be a different color from the original metal (e.g., brown copper roofs turn green), or can convert to a different molecular size or shape (e.g., rust is a bigger molecule than the iron it was formed from). Pollution increases the corrosivity of the environment. When bronze and pollutants interact, particles pit the surface, blue-green copper sulfates form, and rivulets of rain more acidic than pH 4 streak down the sculpture, removing metal in their wake.

Precise application of corrosion science principles to the study of bronze statuary is complicated by the complex shapes of sculpture.

Figure 5a - Chicago, Illinois, 1926.

Figure 5b - Grand Rapids, Michigan, 1928.

Figure 5c - Troy, New York, 1925

Figure 5d - Fitchburg, Massachusetts, 1924.

Figure 5e - Washington, DC, 1965.

Figure 5f - Savannah, Georgia, 1931.

Figure 5g - West Palm Beach, Florida, 1949.

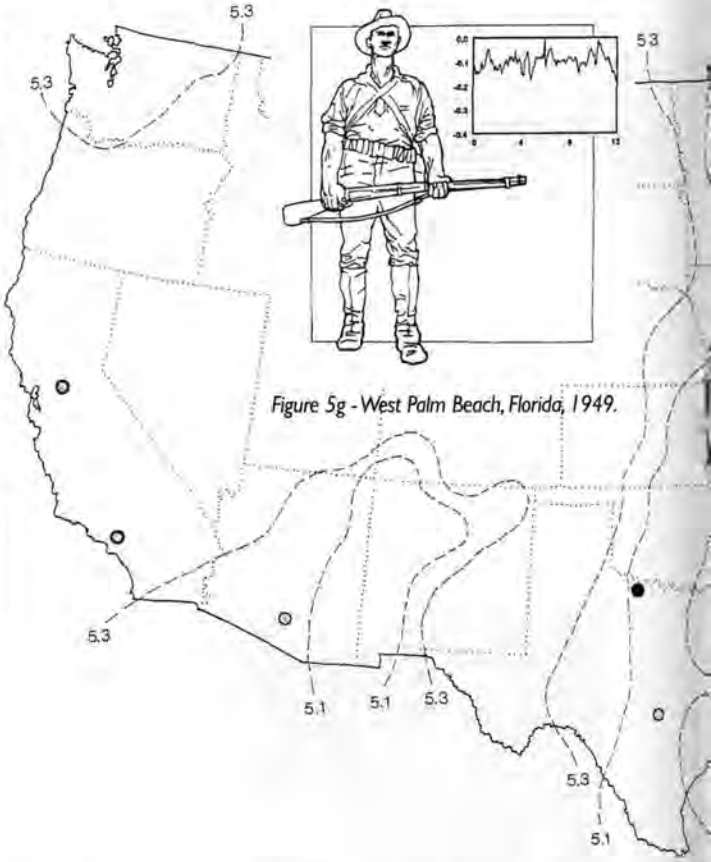


Figure 4 - Distribution of Kitson Hikers and Acid Deposition in the US. pH isopleths courtesy of the National Acid Deposition Program/National Trends Network. Corrosion on a monument reflects the environmental exposure since its placement outdoors. Sulfur dioxide and particle levels in the US have dropped dramatically since the Hikers were new. Today, levels of these pollutants are less than half of what they were in the 1970s; in large industrial cities, the present levels are 10-20% of those in the early-20th century. The pitting profiles reflect dry deposition exposure, past and present.

Rural rain chemistry in the US has been measured since the late 1970s. The 1992 average pH levels mapped here are similar to urban rain acidity, especially in the Midwest. Rain in eastern cities is thought to be about one-third more acidic than rural rain. The maps of uniform and streaking corrosion relate to the frequency and acidity of rain.

Corrosion rates on small laboratory test samples are difficult to relate to sculpture in any quantitative manner. Exposures within a sculpture can vary greatly, ranging from completely rain washed to sheltered from the environment, with similar variety in the resulting corrosion patterns. The temperature of an outdoor bronze can change by more than 10° C between day and night. Dew forms on skyward surfaces much more readily than on groundward surfaces. Curvilinear catchments hold and shed water differently than regular surfaces, creating varying clusters of green and black streaks downstream. On a single statue, it is nearly impossible to unravel the relative importance of water, pollution, shelter, and time. The collection of Kitson *Hikers* presents a rare opportunity to study corrosion of a complex, sculptural shape in a range of real world environments over several decades of exposure.

Researchers at the University of Delaware and the National Park Service have documented the setting, record of treatments, environment, and extent of corrosion for each Kitson *Hiker*. Description of the setting was done on site; the observers identified the type of site and its landscape, the distance from the statue to the street, buildings, and overhanging trees, the facing direction, the height of the base, degree of accessibility to people, animals, and vandals, etc. The history of treatments was gleaned from conversations with the statue's owner or caretaker, who most frequently is the local park department.

A description of the exposure environment (temperature range, precipitation frequency and volume, prevailing winds) was compiled from the long-term weather records for more than 20,000 stations kept at National Oceanic and Atmospheric Administration's (NOAA) National Climate Data

Figure 5h - Tucson, Arizona, 1950.

Center in Asheville, North Carolina. Pollution data are more difficult to find; for major urban areas, air pollution data can be retrieved from the Environmental Protection Agency's AIRS database. Regional acid rain data comes from the National Acid Deposition Program coordinated by Colorado State University.

Corrosion of each Kitson *Hiker* is measured in three dimensions: the geography or extent of corrosion is documented with color photographs, while the topography of the corroded surface is replicated with dental mold material (figures 2 & 3). In the office, the photographs are projected at a consistent size to map the area of green corrosion and the total length of streaking corrosion. The surface of the gun tip molds are traced with a profilometer to develop a picture of the pitting corrosion. From the profile tracing of the surface roughness, one can estimate the number, size, and the depth of the pits in the bronze (figures 5a through 5h).

The Washington, DC *Hiker* (1965) has worn a protective coating of lacquer or wax for most of its short life; it is hardly corroded, with no significant streaking. Thus, the Washington profile can be used as a baseline roughness for comparison with more corroded surfaces of outdoor bronzes. The greatest pitting corrosion is found on older *Hikers* in the Northeast. Compare the profile from the Chicago and Fitchburg statues with the profile from Savannah. The *Hikers* in the industrial cities of Chicago (steel, meat packing, etc.) and Fitchburg (paper mills) show more pits than their contemporaries in Grand Rapids and Troy. Forty years of exposure to desert climates in Tucson and Los Angeles resulted in about the same surface corrosion as the baseline, with 25 years of coated exposure in rainy Washington. The role of rain and sea salt is seen in the contrast in surface roughness between the contemporary Tucson and the West Palm Beach statues. Streaking corrosion is more directly related to rain frequency than to the age of the statue. For example, compare the Tucson corrosion map with the Chicago map. The *Hikers* can also help us understand which site-specific factors, such as proximity to traffic or trees, play important roles in the corrosion of bronze statues. For example, the Troy *Hiker* stands on a college campus; the Fitchburg *Hiker* in a traffic island; the Chicago *Hiker* in a cemetery.

In addition to improving our understanding of bronze corrosion processes, the study of the Kitson *Hikers* has yielded a set of tools for low-tech non-destructive monitoring of statuary corrosion. The techniques of corrosion mapping and surface profiling described here can be used on single statues or collections of outdoor sculpture to track the progress of corrosion, to document conditions before and after conservation treatment, to evaluate the efficacy of treatments, and to establish appropriate maintenance programs based on measured condition of the bronzes in specific exposures and field performance of coatings over time.

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Dennis R. Montagna

Caring for Outdoor Bronze Sculpture

From the mid-19th century through the first decades of the 20th, bronze was the most popular and desirable metal used for the sculptural components of public monuments in the United States (figure 1). By the 1960s, the preeminence of bronze was diminished by the growing popularity of steel alloys, aluminum and other metals. Recently, however, bronze has undergone a resurgence in popularity for monumental public sculpture (figure 2). Whether it is historic or newly cast, bronze sculpture displayed in an outdoor setting requires special care to achieve the long-term survival sought by its creators and patrons.

1. John Severino Conway, The Soldiers Memorial, 1898, bronze and granite, Court of Honor, West Wisconsin Avenue, Milwaukee, Wisconsin. Postcard, ca. 1905.

Bronze is extremely durable, but it is also highly susceptible to corrosion in a chemically aggressive environment. On outdoor bronzes, corrosion processes can produce variegated green and black patinas and aesthetically disfiguring surface textures that are often quite different from those intended by the sculptor and client (figure 3). While some corrosion products are relatively stable and can provide a modicum of protection, others result in ongoing loss of metal surfaces.

As they design treatments for monuments and outdoor sculpture, conservators usually try to strike a balance among three factors: the need to stabilize and protect the surface exposed to the outdoor environment, the need to restore a semblance of the original aesthetic intent, and the need for maintainable treatments at costs that can be borne by owners of the work.

Concerted efforts to clean outdoor bronze sculpture appear to have been relatively rare in the United States before the early 1970s. Cleaning that did occur generally used readily available commercial and industrial cleaning methods. Sandblasting and acid cleanings were the most widespread of these cleaning methods and usually had a devastating effect on bronze sculpture. Hard, jagged sand particles and the relatively high pressure levels used by sandblasters—or the combination of acid cleaners and scouring—not only removed virtually all corrosion products, but also existing evidence of original hand finishing and surface tooling. Typically, these cleanings were carried out not by trained conservators, but by general contractors or by cleaning companies who left the bare bronze

2. A. Joseph Kinkel, Generations, 1985, bronze, Sheet Metal Workers' National Pension Fund Building, Alexandria, Virginia. Photo courtesy of Sheet Metal Workers' National Pension Fund.

3. Frederic Remington, Cowboy, *1908, bronze. Kelly Drive, Fairmount Park, Philadelphia, Pennsylvania. Photo by Franko Khoury, 1982, courtesy of the Fairmount Park Art Association.*

surface to weather once again, or followed the cleaning with an application of a clear lacquer coating or paint. Too often, the coating was neither properly formulated nor adequately applied and maintained.

Unfortunately, the destructive cleaning of bronze by commercial cleaning companies continues today. But by the early 1970s, American art conservators, trained in the care of museum objects, were becoming increasingly interested in the conservation of outdoor works of art. In conjunction with the scientific community, conservators began to examine more closely the phenomena of bronze corrosion and to develop conservation treatments that included a wide range of mechanical and chemical cleaning methods. Some mechanical methods used abrasive pads, dental tools and considerable hand work, while others centered on the use of various abrasive media fed into a controlled air flow. The chemical cleaning methods usually consisted of acidic or alkaline strippers that were both labor-intensive and difficult to control.

Glass bead peening was developed at this time. Many considered it an advance over sandblasting, and it became a popular method of bronze cleaning in the United States by the mid-1970s. Also designed to remove all surface corrosion, this method, using spherical glass beads with lower blasting pressure, was thought to remove less of the bronze substrate than did sandblasting that typically had been used with higher blasting pressure. Following cleaning, a new chemical patina and a protective lacquer coating were usually applied (figure 4).

During the late 1970s through the mid 1980s, conservators began to question the practice of removing all corrosion products. Subsequent laboratory research and field experience confirmed that such aggressive treatments were not needed to insure the long-term preservation of bronze sculpture. More importantly, glass bead peening was shown to damage the bronze substrate. Consequently, the bronze conservation field made a concerted shift toward less invasive cleaning methods.

Throughout the 1980s, glass bead peening was supplanted by methods that ranged from a simple washing and waxing of the bronze surface, to the removal of grime and superficial corrosion products through low-pressure blasting with soft agricultural media—pulverized walnut shells being the most widely used—that leave intact the denser corrosion products and the metal beneath them. Maintaining this firmly adhered corrosion provides an adequate surface for applied protective coatings and usually obviates the need to carry out extensive repatination. Current research is exploring other cleaning systems, including medium pressure water blasting, that may remove more of these

4. Jean Antonin Mercié, Robert E. Lee Monument, *1890, bronze and granite. Monument Avenue, Richmond, Virginia. Photo by the author, 1983.*

5. Frederic Remington, Cowboy, 1908, bronze. Kelly Drive, Fairmount Park, Philadelphia, Pennsylvania. This is one of twenty-five monuments that Philadelphia's Fairmount Park Art Association conserved during the bronze sculpture preservation project that it began in the early 1980s. Each bronze received wax coatings that are maintained annually. Photo by the author, 1990.

denser corrosion products while leaving the metal substrate unaltered.

During the late 1970s and early 1980s, the Smithsonian Institution, the City of Baltimore, Philadelphia's Fairmount Park Art Association, and the National Park Service all began large-scale bronze conservation and maintenance programs that used less invasive treatments. Some employed initial treatments with low-pressure walnut shell blasting followed by applications of wax, while others used only detergent and water washing and waxing. But all of these programs emphasize a regimen of periodic inspection and coatings maintenance to retain the benefits of an initial conservation treatment (figure 5).

Once a bronze surface has been cleaned, some type of coating must be applied to prevent or limit future corrosion by minimizing contact between the metal and the moisture and pollutants present in its environment. The coatings most frequently used for maintaining outdoor sculpture include waxes, which typically work best when inspected and renewed at intervals of one to three years; lacquers, which require repairs when damaged, as well as removal and reapplication at five-year intervals; and combinations of lacquers with waxes applied as a sacrificial top coat.

The useful lives of current organic coatings are clearly limited, and many of the most widely used lacquers may soon be unavailable because they contain high levels of volatile organic compounds (VOCs). With the universe of accepted cleaning methods now much narrower than it was a decade or so ago, more emphasis is being placed on research aimed at increasing the performance, maintainability and appropriateness of various coating materials.

Only the removal of bronzes from the outdoor environments for which they were created to the protection afforded by a museum setting can guarantee their future well-being; this is clearly both unfeasible and inappropriate in most cases. Programs that use gentle cleaning methods coupled with the application and regular maintenance of protective coatings have proven to be a reasonable alternative and seem to offer the best hope for the long-term preservation of an important body of cultural resources (figures 6 & 7).

—Dennis R. Montagna

Author's note: *Special thanks go to Andrew Lins, Senior Conservator of Decorative Arts and Sculpture, Philadelphia Museum of Art for his assistance in the preparation of this article.*

6. Daniel Chester French and Edward Clark Potter, General Ulysses S. Grant Monument, *1897, bronze and granite, Kelly and Fountain Green Drives, Fairmount Park, Philadelphia. Photograph of dedication ceremonies, 1899.*

7. Daniel Chester French and Edward Clark Potter, General Ulysses S. Grant Monument, *1897, bronze and granite, Kelly and Fountain Green Drives, Fairmount Park, Philadelphia. Ten years after its conservation, the bronze remains in a good state of preservation. It receives an annual inspection and maintenance of its wax coating. Photo by the author.*

Mark Rabinowitz

The Central Park Monuments Conservation Program

McKim, Mead, and White, architects, Augustus Saint-Gaudens, sculptor, William Tecumseh Sherman, *1903, bronze and granite, Grand Army Plaza, New York. Photo, ca. 1904, courtesy of the Central Park Conservancy.*

An integral part of Central Park's historic fabric is its unique and exceptional collection of public sculpture. More than 50 mostly bronze monuments, memorials and statues are installed throughout the Park and include important examples of most American and European schools of public sculpture from the mid-19th century through the early decades of the 20th century. Works such as the Augustus Saint-Gaudens' *William Tecumseh Sherman* (1903) and John Quincy Adams Ward's *Indian Hunter* (1866) stand among the finest American sculptures. This priceless artistic heritage requires a dedicated commitment of comprehensive conservation treatments and follow-up maintenance if it is to be preserved for the future. The Central Park Conservancy has dedicated itself to this goal by the creation of an in-house maintenance and conservation crew.

The Central Park Monuments Conservation Program performs and coordinates all work related to the preservation of the statuary and plaques in the park. It was constituted in its present form in 1991 with a start-up grant from an individual donor concerned with public art, and staffed with two full-time employees—a coordinator and technician assisted by student interns. With the close of 1994 it has completed three full seasons of field work, the first year's efforts only having begun in the fall of 1991.

Conservation program staff members Joseph Jernejciv and Chanyuthy Ky complete the application of a protective coating during the conservation of the equestrian monument to José de San Martin. Photo by Sarah Cedar Miller, 1994.

Like most outdoor sculptures in America, Central Park's bronze statues had suffered variously advancing stages of corrosion due to neglect and lack of maintenance up until the mid-1970s. Efforts by the New York City Department of Parks and Recreation and the Central Park Conservancy to halt that decline resulted in 17 bronze works receiving some form of comprehensive conservation before 1991. Most of these efforts were performed by outside contractors. These treatments and an earlier attempt at creating an in-house conservation crew were hampered by controversies that surrounded the choice of conservation techniques and treatment goals.

At the inception of the current program this controversy was abating. The goals and techniques accepted and applied by outdoor sculpture conservators had narrowed to those at the less intrusive end of the spectrum. Except for specialized cases, gilt statuary among them, the finished appearance of most conservations carried out under Central Park's program tended toward a middle ground between wholesale restoration and stabilization of the existing state.

To avoid further controversies, build expertise, and develop relationships within the conservation community, the bronze conservation crew dedicated much of 1992, its first full year in the field, to stabilization and maintenance treatments rather than comprehensive conservations. All previous conservation treatments require maintenance to remain effective and not degrade, and these less intrusive procedures do not require official approvals before they are carried out. In addition, heretofore un-conserved works were gently cleaned and coated with paste wax to stabilize their current conditions pending future conservations.

Toward the end of the 1992 working season, the bronze conservation crew had achieved enough field experience and professional recognition to proceed with more comprehensive conservations. Henry Lie of the Harvard Conservation Laboratories, a recognized authority in outdoor sculpture conservation, agreed to act as consulting conservator to the program, reviewing proposals and recommending treatments. It was his association with the program that helped to convince the Conservation Advisory Group to approve the first set of five treatments which were performed during the fall. By the close of the 1992 working season, Central Park's bronze conservation staff had carried out a wide array of treatments. All of the fountains and playground statues had been cleaned and waxed twice, all of the previously conserved sculptures had been cleaned and maintained, the first

five in-house conservations were complete, and all other works except those slated for conservation during the up-coming year had been stabilized. Finally, the program coordinated and assisted in the re-coating of a work conserved by outside contractors in 1990.

The 1993 work period then constituted the first year during which the crew could dedicate a full three months of their outdoors work period toward new conservation treatments, with maintenance of earlier treatments consuming the remaining six months. These included start-up and shutdown routines for the fountains, washing and re-coating all previously treated pieces, and any emergency interventions necessitated by graffiti or vandalism. Despite all of this, the crew conserved five larger and more complex works than had been attempted the previous year. We believe these treatments to be among the most successful in the park due largely to the increasing skills of the crew and its ability to commit as much time as necessary to achieve the best product. Patination skills were helped by consultation with Jerry Jiritano, former head of the patination department of the Tallix art foundry. Two other conservations were performed by outside contractors in collaboration with the Monuments Conservation Program under sponsorship of the Municipal Arts Society's Adopt-A-Monument Program.

Mark Rabinowitz attaches a newly-cast swallow to replace one lost from the Burnett Fountain. *Photo by Sarah Cedar Miller, 1993.*

The crew has continued to perform during the 1994 working season. Four additional bronzes, including two very large-scale works, have been conserved. At this point all of the bronzes in Central Park, for which treatment is appropriate, have been conserved or stabilized pending future treatment, and all of the conserved works have now been placed on a regular maintenance schedule. We are projecting that the entire collection will be adequately conserved within two years. In addition, the crew has begun to treat our stone monuments by performing Dutchman repairs and unit replacements of sculptural elements. The program is developing into a comprehensive sculpture conservation resource.

The crew has also been responsible for the installation and maintenance of plaques and other decorative elements within the park. This has absorbed about 15% of its time. Off-seasons have been taken up with the writing of reports on the previous year's treatments and on the research and writing of proposals for the next year's efforts.

Above all, a premium is placed on quality. Here, the benefits of an in-house program are clear. We have the luxury of dedicating time to research and repeated treatments that is impossible in a contracted environment. In this way, experts can be brought in for specialized circumstances, while the crew is free to spend a good deal of time on the laborious treatments.

Central Park's program has proved very cost-effective as well. Our per-sculpture conservation treatment costs have run about 1/2 of those performed by contractors. A contracted maintenance program to perform follow-up care would run as much as three times our costs. It is much more difficult to place a value on the benefits to be derived from the crew's intimate knowledge of the collection that results from repeatedly returning to these works to inspect them and care for them. This knowledge means that they have a sensitivity to the long-term needs of the collection.

Training is a crucial part of this project. Staff development through frequent contact with experts in the field has ensured that all procedures are of the latest techniques and to the highest standards. In-house technicians and student interns have learned skills through hands-on experience that has allowed them to proceed in the field of monuments preservation. We intend to integrate this highly skilled crew with other preservation technicians to continue to develop in-house resources capable of guaranteeing the future preservation of all of the park's built environment. In this way the skills developed through the conservation of the collection can continue to serve the broader needs of the preservation of the park. For efficiency, quality control, and cost effectiveness, the evidence supporting the value of our in-house preservation program is compelling.

Mark Rabinowitz is the Director of Conservation and Sculpture, The Central Park Conservancy.

Diane M. Buck

Long-Term Care for Sculpture Collections

1. Anna Hyatt Huntington, Fighting Stallions, 1950, cast aluminum. Brookgreen Gardens, Murrells Inlet, South Carolina. Postcard, ca. 1953.

Long-term conservation programs are generally acknowledged as essential for the preservation of outdoor sculpture. Three notable institutions have developed such detailed plans: The Bradley Sculpture Gardens near Milwaukee, Wisconsin; the Seattle Arts Commission; and Brookgreen Gardens in Murrells Inlet, South Carolina (figure 1).

The Bradley Sculpture Garden is a semi-private modern sculpture garden in a rural setting on approximately 20 acres of the Bradley estate outside Milwaukee. With over 60 works by 40 artists, the collection represents international sculpture movements from the 1960s and 1970s (figures 2 & 3). An established family foundation has encouraged school and adult groups to visit the gardens over the past 20 years, and during this period a growing staff has followed a routine maintenance schedule, consisting of inspection, washing and waxing, and documentation of any problems that arise with the collection.

2. William Underhill, Ursa Major, 1966, Cor-Ten steel. Bradley Sculpture Garden, Milwaukee, Wisconsin. Photo by Sam Dadian.

During the past five years, the Bradley Family Foundation has dedicated monies for the long-term conservation of the collection. A staff of three to four have worked with a conservator to assess the condition and recommend treatment of all the artworks to the Foundation. With this long-term plan in place, the staff and conservator have begun correcting problems, from the simplest to the most complex. The conservator has made regular visitations to the garden to undertake any needed conservation treatments. Additional conservation work is performed on a contract basis in consultation with the lead conservator, the sculptor, the foundation, and the staff.

Challenges faced by the staff include large annual temperature changes due to the Midwestern climate, and a large amount of guano from a goose flyway overhead. Contemporary sculpture often does not have a pedestal and/or base, and in this changing climate, the works tend to sink into the ground. Several monumental sculptures have been temporarily removed and permanent footings placed below the frost line to preserve them.

Another institution successfully facing the challenges of long-term care of its artwork is the Brookgreen Sculpture Gardens, in Murrells Inlet, South Carolina. Probably the first outdoor public sculpture garden in the United States, it is considered by many to be an exemplary model for sculpture gardens in its approach to long-term collection care. Founded by Archer Milton Huntington and Anna Hyatt Huntington, a sculptor, Brookgreen Gardens was incorporated into a nonprofit institution in 1931. The collection represents over 500 works of representation art, from the 1800s to the present, on a 10,000-acre old plantation.

While the Huntingtons collected a variety of art works, Anna Hyatt, an independent artist, created scores of sculptures which are sited in Brookgreen Gardens. Besides employing landscape architects and scores of gardeners, the couple hired Robert A. Ballie, a stonecutter, to work with Ms. Hyatt on her sculpture projects. Ballie eventually became involved in the maintenance and care of the collection. By the 1950s, he had established a regular maintenance schedule for all the sculpture.

2. *[foreground] Barbara Hepworth,* Two Piece Marble (Rangatira) #28, *1968-69, marble. [background] George Sugarman,* Trio, *1972-73, painted aluminum. Bradley Sculpture Garden, Milwaukee, Wisconsin. Photo by Sam Dadian.*

From this early beginning, the conservation approaches and practices used at the Brookgreen Gardens evolved. Currently, Garden curators and other staff consult with Henry Lie, Director, Conservator of Objects and Sculpture, Straus Center for Conservation, Harvard University Art Museums. Maintenance practices include cleaning the bronzes and stone works 3-4 times a year, when the air is dry and warm. Bronze and stone sculptures are washed with low pressure water and, if necessary, a mild detergent applied with soft bristled plastic brushes. No metal touches the bronzes. If ladders are needed to reach portions of the sculpture, only wooden ones are used. A mild household wax is used to protect the works as part of the regular maintenance routine.

Although thousands of tourists visit Brookgreen Gardens each year, vandalism is very slight. A few of the works are damaged by deposits from the Gardens' surrounding live oak and magnolia trees, as well as from birds. However, because of the careful and regular maintenance program, long-term damage from these elements is usually avoided.

Consulting conservator Henry Lie and the Gardens staff have surveyed all the collection and prioritized the works that need conservation. There are no in-house conservators at the Gardens; and so, the staff depends on grants to fund conservation work. Once funding has been secured, professional conservators are hired and the actual conservation work is undertaken.

Like Bradley and Brookgreen sculpture gardens, the Seattle Arts Commission (SAC), established in 1971, has become a strong proponent of the long-term care of public art. The composition of the SAC is similar to commissions in other cities: 15 citizens serve as volunteers, appointed by the mayor and subject to city council approval. Comprised of civic leaders, artists, architects, and art educators, the SAC is charged by the city ordinance "to promote and encourage public programs to further the development and public awareness of and interest in the fine and performing arts in Seattle."

With the aid of a Percent-for-Art ordinance, the Seattle Arts Commission began acquiring works of art representative of the city's diverse artistic expression. This policy allowed the SAC to secure art through open and limited competition, as well as through direct selection. Today the collection encompasses works of all media and currently includes 150-200 permanent public works and 1,500 movable objects. Most of these objects are in public buildings and on municipal grounds and parks. Seattle has few historic works; therefore, acquisition of most of the sculpture collection has occurred since the establishment of the SAC.

Such an aggressive acquisition policy mandated that the SAC adopt a stewardship approach to the ever-growing collection. In 1975, the SAC contracted with Artech, an art handling and installation service of the Pacific Northwest, to store, move, handle, and maintain the City of Seattle's collection of portable sculpture and two-dimensional works. Artech, with a current annual budget from the city of $86,000, manages the city's collection. Artech does employ artists, although it does not have a trained conservator on staff. It assesses the condition of Seattle's public sculpture once a year and washes and waxes the collection twice a year. SAC and Artech staff work together to prioritize the sculptures requiring conservation treatment.

This approach has insured that the SAC collection remains in excellent condition. Practices employed here, as well as at the Bradley and the Brookgreen sculpture gardens, may help other institutions develop long-range conservation plans for the care of their sculpture collections.

Diane M. Buck is an art educator whose book, Outdoor Sculpture in Milwaukee: A Cultural and Historical Guidebook, *was recently published by The State Historical Society of Wisconsin.*

Margaret Robinette and John Dennis

Planning Ahead for the Care of New Artworks

Maintenance of public artwork is the investment required to ensure its permanence. Ultimately, it is cost-effective, not only because it defers expensive conservation treatment, but also because it helps preserve the quality of the public environment.

Artists, being curious and creative individuals, have traditionally explored the use of new materials and processes. Otherwise, we might still be crawling into caves to view artworks. The industrial, technical, and electronic-computer revolutions have continued to provide new materials and processes tantalizing to the imaginations of artists. Fascinating, sometimes astounding, and frequently difficult to maintain artworks have resulted. In their desire to be "on the cutting edge," some agencies have commissioned and installed artworks with inherently problematical maintenance requirements. Also, in today's world, the public environment has often become a hostile one for public art. Vandalism is a major factor impacting maintenance and conservation budgets. This does not mean that we should stop commissioning and installing contemporary works. It does mean, however, that commissioning organizations must plan for the ongoing maintenance in all public art projects, whether created with traditional or contemporary media and uses.

1. Jonathan Borofsky, Hammering Man, *1982, painted wood, steel, and aluminum with motor. Photo by Scott Hager.*

Kinetic artworks with moving parts do not necessarily involve the use of contemporary materials; in fact, more often than not they are metal, frequently steel. But the mechanisms that make movement possible can require special care. One example achieving world-wide recognition is Jonathan Borofsky's *Hammering Man.* Two prominent and more or less permanent locations for versions of this work are the Dallas Museum of Art (figure 1), where the "hammerer" is on loan to that institution from the Raymond Nasher collection, and the Seattle Art Museum. Although some kinetic works are wind-powered, these colossal figures have motorized arm movements to keep them "hammering." The motor on the back side of the Dallas work is oiled weekly with a grease gun, and oil leakage is cleaned off the base monthly. So far, the figure on the entrance plaza of the Dallas Museum of Art has not been the target of vandalism. However, the one in Seattle has. Not only has it been the subject of relatively non-damaging pranksterism—shackled by a gigantic ball and chain—but it has also suffered more serious attacks via brush paint, spray paint, and scratches with sharp instruments. The latter type of damage is both difficult and costly to remove. In most urban settings the commissioning organizations must assume and provide for the probability of vandalism.

In another downtown public setting, The Dallas Morning News-WFAA Foundation commissioned and installed a kinetic motorized sculpture with advance knowledge that maintenance of this particular artwork would be substantial and ongoing. The work is *Harrow,* by Linnea Glatt with mechanical consultation by Jim Cinquemani (figure 2). It is a giant cone-shaped "harrow" that turns imperceptibly every 24 hours on a circular track of sand, symbolizing the cyclical nature of life. It is an evocative work, inviting the viewer to quiet contemplation from one of the Cor-Ten and wood seats placed around the circle of sand. In planning for this artwork, says Judith Garrett, Executive Director of The Dallas Morning News - WFAA Foundation, "we had to accept the fact that we would have long-term continuous maintenance."

At the outset the artists held a training session for the maintenance department of *The Dallas Morning News.* These skilled technicians, who keep

the newspaper's presses running smoothly, quickly mastered the mechanical maintenance requirements of the giant motorized cone. Two daily checks are performed, one in the morning by the landscape crew to pick up any debris, and one in the afternoon by the maintenance engineering team to look for graffiti on the work and be sure that the motor is running. Installed in the spring of 1992, this work remains in pristine condition. But it is obvious that not all commissioning organizations can make this level of commitment.

Glass may not be a "new" material, but it is certainly being used by artists in new ways, both indoors and outdoors. Maya Lin's glass *Groundswell* at the Wexner Center for the Arts at Ohio State University was installed in October 1993. The architect/artist, designer of the Vietnam Memorial in Washington, DC, filled three levels of exterior unused spaces (termed "residual spaces") with 40 tons of broken safety glass raked into "land forms" reflecting sun by day and artificial light by night. The material is virtually maintenance free, according to Annetta Massie, Assistant Curator at the Wexner Center for the Arts. Occasionally people have jumped into it, but there are no sharp edges, and no danger of injury. The center uses voice-activated multiple security cameras and warning signs as well as security guards, and all incidents are reported and addressed with efficiency. One notable incident of vandalism, paint poured into the glass, required the removal of all the glass and its total replacement under the supervision of the artist.

Neon, that colorful and attractive tool of commercial advertising, has been adopted and manipulated by artists to become a very appropriate material for contemporary expression. Cork Marchechi's *Flint Hills Apparition* was installed on the campus at Wichita State University, Kansas, in April 1993 (figure 3). A 59'-long neon "wiggle" hanging between two glass enclosed walkways, it references the nearby Flint Hills. The painted aluminum curves, visible in daylight, give way to the illuminated neon by night, with random color patterns that fade in and out. The primary concern was designing and constructing the work to withstand the Kansas winds, which can reach 80 miles per hour. Protected by plexiglass on both sides, the work is secured with stainless steel cables of the type designed for aircraft carriers. So far, says David Murano, Technical Curator for the Edwin A. Ulrich Museum, there have been no problems at all, but they are planning a complete inspection soon.

In Dallas, Stephen Antonakas' *Neon for Southwestern Bell* has provided a colorful accent in the public environment for more than 10 years. With the outdoor part encased in the plexi-glass canopy of a bus shelter, and the indoor part extending downward into the employee restaurant, the work enlivens the environment for two different "publics." The indoor part is mounted directly on the granite wall of the restaurant and is not protected. The wiring was designed for easy accessibility, and behind the granite wall is a "fake" wall with a small locked door for which only maintenance personnel have the key. The artist had all of the glass fabricated in Dallas, and all of the patterns are in storage at Southwestern Bell. Art consultant Sharon Leeber inspects the work every two years, and so far maintenance has consisted only of the replacement of power transformers at a cost of less than $1,000.

Among artists intrigued by the high-tech communications tools of our contemporary world, none is better known than Nam June Paik.

2. Linnea Glatt, Harrow, 1992, Cor-Ten steel, wood, and sand. Photo by Craig Kuhner.

3. Cork Marchechi, Flint Hills Apparition, *1993, aluminum and neon. Photo by Dimitris Skliris, courtesy Edwin A. Ulrich Museum of Art.*

Commissioned by Chase Manhattan Bank for its newly opened Metro Tech Center in Brooklyn, Paik created the *Chase Wall*, 429 TV sets simultaneously displaying live computer-controlled cablecasts and computer-animated sequences eight hours per day. It is an artwork totally appropriate to the technical headquarters for one of the world's largest banks, and was installed in the huge lobby of one of the main entrances to the facility in October 1992. At this point there has been no vandalism, although sometimes people do try to change stations on the TVs, not realizing that they are computer controlled. The capital budget for the facility provides for the necessary ongoing and very complex maintenance, which is performed by a contractor recommended by the artist. Artworks using computer-controlled TV sets have in some instances been installed outdoors, but only on a temporary basis.

When commissioning contemporary artworks, maintenance considerations can be complex. The commissioning organization or individual who is unaware or who does not plan for long-term care is inviting headaches, if not disaster. Many agencies today are incorporating planning for maintenance in their commissioning processes.

The City of Dallas Cultural Policy identified maintenance implications as a primary factor in commissioning public artworks and in evaluating proposed donations or loans of artworks to the city. Donors of artworks for which the annual maintenance costs exceed $100 are asked to be responsible for the additional amount. Commissioned artists are required by contract to provide maintenance recommendations and cost estimates upon installation of their artworks. Often the artist is made responsible for the first year's maintenance. This encourages the artist to design works which are as maintenance-free as possible. The five collaborating artists who created the $1.2 million public art program for the 1994 Dallas Convention Center expansion solved the maintenance problem by integrating the art into the terrazzo floor. Hence, regular building maintenance takes care of the artwork. Another artist is creating sculptures symbolic of water in polyvinyl chloride (PVC) pipe, factory extruded in blue and white. PVC was developed in Germany in the 1930s to replace iron and steel pipe underground, and there is reasonable confidence in its durability.

The Dallas Area Rapid Transit (DART) Art and Design Program, which is in the process of commissioning artists to create artworks for light rail stations throughout the city, requires artists to turn in maintenance recommendations with their final proposals. DART maintenance staff is available to review any proposals that appear problematic. Materials used must have a lifetime of 20 years, and that information must be documented.

Commissioning organizations and artists must also consider the specific site and/or neighborhood in which the artwork will be located, and whether there are environmental conditions that will affect the work, or whether there is a greater than average probability of vandalism. The Dallas PVC pipe water symbols will be placed inside rather than outside the fence that surrounds the neighborhood pump station where they will be located, making them less physically accessible to youngsters who might perceive them as play-sculptures to be climbed.

Obviously there is no way to predict and avoid all possible wear or damage to public artworks. Regular maintenance—and that does not necessarily mean annual—is the investment required to ensure the permanence and viability of any artwork, whether cast bronze or computerized TV sets. Ultimately it is cost-effective, not just because it defers (and sometimes eliminates) costly conservation procedures, but because it helps to preserve the quality of the public environment.

Margaret Robinette is Public Art Coordinator at the Dallas Office of Cultural Affairs.
John Dennis is Conservator at the Dallas Museum of Art.

Michele Cohen

Art in New York City's Public Schools

Building neglect, building renovation, graffiti, improper maintenance, no maintenance and vandalism are just some of the factors that have contributed to the deterioration of public art in the New York City Schools. We may not be able to control the environment or prevent vandalism, but we can minimize their effects through careful planning.

As part of the process of commissioning new public art for school buildings through the Percent for Art program, every artist is required by contract to consult with a conservator and to submit a letter from the conservator certifying that the design and materials are appropriate and that the completed piece can be easily maintained. Depending on the complexity of the project, the consultation may be a single meeting or a series of reviews and an inspection of the completed artwork. In some cases, the conservator and fabricator enter into a lengthy dialogue.

In one instance, a conservator considered the practical ramifications of conserving a sculpture on site when the piece was to be situated on a gymnasium roof (figures 1 & 2). Spanning 45' across the gymnasium roof of a south Bronx elementary school, *Open Voyage*, a painted brushed aluminum sculpture by Bob Rivera, is a colorful neighborhood landmark. Situated so it would be unassailable by vandals and climbers, its unique location presented some practical considerations for future conservation. To avoid the problem of working with toxic chemicals on school property and in recognition of limited access to the sculpture, the consultant conservator recommended that instead of painting the entire sculpture, the artist should design removable powder coated cut-outs which could be taken off-site and re-coated. Not only is baked enamel more durable than the alkyd enamel paint specified for the rear supports of the sculpture (baked enamel should last about 25 years versus 10 years for the alkyd enamel), this approach will facilitate future maintenance of the work.

1. Bob Rivera, Open Voyage, 1992, painted brushed aluminum, P.S. 279, Bronx, New York.

Several new bronzes have been commissioned for school buildings, including a set of gates, a free-standing sculpture on a concrete pedestal, and a combination fence and gate. In planning the long-term maintenance for these pieces, coating durability and ease of application are prime concerns. Foundries and conservators continue to disagree about the merits of a combined Incralac and cold wax system versus a hot wax application followed by cold wax protective coatings. In the case of two newly-commissioned bronzes, we have opted for an Incralac and cold wax coating system but have not determined that this is the best approach to take for the collection's older bronzes. We will initiate a pilot maintenance program this spring, which should help us to better evaluated the relative merits of available coating systems.

Inadequate water drainage is a problem that perpetually plagues outdoor sculpture and is frequently overlooked by sculpture fabricators and collaborating architects. In reviewing the designs for Peter Gourfain's intricately modeled *We Shall Overcome* (figure 3), a testament to the Civil Rights movement conceived as an 8' high columnar bronze arm and hand, the conservator recognized the need to drain interior condensation without staining the pedestal. The solution, a drainage pipe directing the water through the center of the 3' high pedestal to an outlet on the bottom, was easy to incorporate. In addition, the pedestal was painted with a brick-red glossy paint to protect it further from staining and graffiti.

2. Bob Rivera, Open Voyage, *1992, painted brushed aluminum, P.S. 279, Bronx, New York.*

In reviewing specifications for an ornamental garden fence honoring Jim Thorpe, for whom the school is named, we examined another recently commissioned exterior painted steel fence and were surprised to detect, after only five years, failing paint and rust at surfaces that are closely fit together. In this case, the conservator noted that the surface had been improperly cleaned and primed. To avoid these condition problems with the Jim Thorpe fence, the conservator recommended that welds be extended, drainage be enhanced, and that the entire surface be blasted before it was primed and painted. The fabricator agreed to comply with these conditions, but because of the increased cost, rejected the suggestion to substitute M588-type of weathering steel for the mild carbon steel specified.

Despite our efforts to avoid conservation problems by involving conservators in the review of materials and fabrication methods, we have encountered numerous damages to artworks caused by well intentioned, but misguided, maintenance undertaken by the Board of Education. In response to graffiti, custodians routinely paint over defaced building exteriors as well as outdoor sculptures. Colors depend on available paint. Contractors hired to install electrical conduit or alarms or clocks have no compunction about mounting units directly on underlying murals. Stringent cleaning solvents leave permanent scars on delicate painted surfaces.

3. Peter Gourfain, We Shall Overcome, *1993, bronze, P.S. 6, Brooklyn, New York.*

It is evident from the condition problems affecting many artworks that education is clearly required for both the custodial staff and building users. We have begun this process by doing a series of slide presentations, highlighting avoidable damages, for custodian supervisors as well as circulating information about the collection to the Board of Education's maintenance staff. Upon the installation of all new artworks, we send school custodians and principals an information packet that includes detailed maintenance instructions, generally what *not to do.* We have also instituted a sign program that identifies the artwork and advises school personnel to call the Public Art for Public Schools office if the artwork is damaged. The signs serve the dual purpose of flagging something that is "art" and requires special maintenance as well as educating the general public about the object.

When we undertake conservation projects we go a step further and require the conservator to make a presentation to students and staff about the work executed. Although on paper this appears to be a useful strategy, in practice it has been difficult to coordinate such lectures. Perhaps a more valuable tool for the long-term preservation of the object is the installation of signs describing the conservation process, complete with color reproductions showing the artwork before and after. Fabricated in porcelain enamel on metal, these durable signs will likely outlast the artworks themselves, but they are expensive to manufacture.

Looking toward the future, we hope to develop a maintenance program for all objects in the collection. We have considered the possibility of school custodians performing certain routine tasks, such as hosing down accessible exterior sculptures, but given the breadth of custodial responsibilities, this may prove impractical. In response to the tremendous budget cuts affecting the New York City public schools, we are also exploring outside funding sources to support an on-going maintenance and conservation program.

In both the preservation of the existing collection and in commissioning new works, ease of maintenance and durability are critical. As curators of the collection, we are challenged with finding practical solutions within the constraints of a functioning school, limited resources, and city bidding and contracting procedures. Public art in school buildings is very much shaped by the institution which houses it.

Michele Cohen is Program Director, Public Art for Public Schools, New York City.

Michael W. Panhorst

Cleveland's *Fountain of Eternal Life* Gets 99-Year Lease on Life

By making the restoration of a fountain part of the general development package for the fountain plaza, the City of Cleveland has saved the memorial and insured its survival for the next century. By 1987 the *Fountain of Eternal Life*, which had been dedicated only two decades earlier to the World War II and Korean War soldiers of Cuyahoga County, had fallen into disrepair (figure 1). The plumbing had been pirated and the fountain was inoperative. The colossal bronze figure of *Peace Arising from the Flames of War* and the 10' diameter sphere at its base were streaked and stained with corrosion, grit, and grime. But when a parking garage developer proposed removing the monument for construction of an underground parking garage beneath the fountain, Clevelanders rallied to save the memorial.

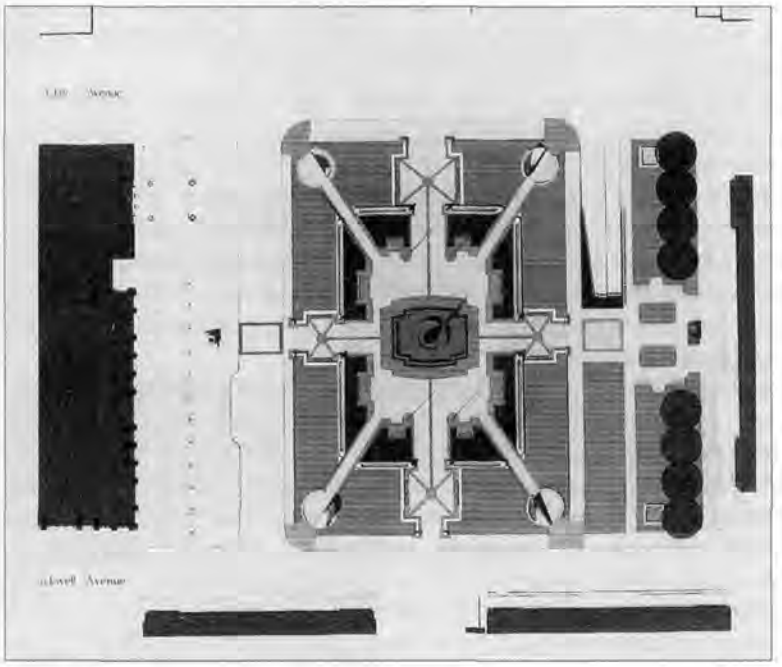
Following the parking lot developer's failure to present an acceptable statue restoration plan, the City of Cleveland entered into discussions with Jacobs-Visconci-Jacobs (JVJ), an international development group headquartered in Cleveland, regarding the development of a mixed-use project adjacent to the fountain plaza, which stands at the end of a block-wide mall designed by Daniel Burnham in the early-20th century. The mall, which represents Burnham's largest completed urban plan, stretches about a mile north to the shores of Lake Erie. The city subsequently brokered a far-sighted deal with JVJ that included construction of two new high-rise buildings and the underground garage plus renovation of the plaza, while saving the memorial and insuring its survival for a century (figure 2).

The memorial that took little more than 20 years to deteriorate had taken almost 20 years to build. The *Cleveland Press* newspaper sponsored construction of the war memorial with a public subscription drive immediately after World War II ended. Sculptor Marshall M. Fredericks (born 1908), a 1930 graduate of the Cleveland School of Art and a World War II veteran who served in the Pacific and Far East, was asked to submit a design for the memorial in September 1945. After various revisions, he won approval for the design of the largest sculptural fountain then in existence.

Fredericks' composition features a muscular male figure rising amidst flames of war from a filigreed sphere ornamented with emblems of eternal life derived from cultures around the world. This bronze centerpiece, patinated in Fredericks' hallmark sea green, sits in a large stone basin with the names of Cleveland's fatalities inscribed on the outside walls. Four low, massive granite sculptures symbolizing the Nordic, Southern, Eastern, and Western civilizations sit in the basin, surrounding the central figure. The obdurate Norwegian Emerald Pearl granite used for the civilization groups required two years for each group's carving. Since Fredericks found no fine arts foundries willing and able to cast the 37' tall bronze figure, he developed his own foundry in Norway, his ancestral home. Typical fundraising difficulties, production challenges, and Fredericks' commissions for two other bronze sculptures of comparable size

1. Marshall M. Fredericks, Fountain of Eternal Life, *1964, bronze and granite, Cleveland, Ohio. Photo by the author.*

combined to delay dedication of the memorial until 1964. By that date the Korean War had occurred, and organizers thus decided that the fountain should also recognize local soldiers who died in that conflict. Although Fredericks accepted no fee for his services, the cost of the memorial's production totaled $250,000. Funding was provided by the *Cleveland Press* public subscription and the City of Cleveland.



2. Richard H. Kaplan Architects, Plan for Memorial Plaza, *Cleveland, Ohio, 1992, showing the fountain and the new corner portals and automobile ramp into the parking garage beneath it. Plan courtesy of Richard H. Kaplan.*

Once dedicated, the fountain received little maintenance, and by the mid-1980s the plaza was considered an eyesore. The city investigated developing an underground parking garage beneath the fountain and, in the process, restoring it. The city bid the proposal and selected a firm to undertake the work. The selected garage developer failed to provide the required statue restoration plan, and the agreement subsequently was canceled. In 1986 JVJ came forward with a plan. They proposed to construct a high-rise hotel and office complex adjacent to the fountain.

JVJ also sought to build an underground parking garage on the site of the fountain and, to a great extent, the viability of the commercial development hinged on the availability of parking. Like other cities in the "rust belt," Cleveland's economy and urban fabric desperately needed downtown development. But the tremendous weight of the fountain and its water posed structural problems that increased design and construction expenses and severely limited the size of any parking structure that might be built beneath it. History would soon prove that, although costly, those problems were not insurmountable. Still, it took a major offensive by the combined forces of Cleveland's veterans to save the memorial.

Combining the forces of veterans of World War II, Korea, Vietnam, and the Persian Gulf was as controversial as early ideas of removing the memorial. Veterans did not want the original memorial removed, but Vietnam veterans complained that they had no memorial and here they saw an opportunity to obtain one and to gain the recognition they had been denied. They organized, as did the veterans of other wars, and after considerable disagreement the various veteran groups finally coalesced, insisting on the preservation of the fountain and the addition of memorial architecture or a sculpture to commemorate soldiers who fought in Vietnam and the Persian Gulf.

Meanwhile, the Planning Commission and the Landmarks Commission of the City of Cleveland were working with JVJ to find a solution to the complex technical and design problems. JVJ was initially leery of the extra costs associated with removing and reinstalling the fountain, but a $1.5 million fund-raising effort anchored by a $250,000 gift from Ford Motor Company (Cleveland's largest employer) insured the restoration of the fountain. Marshall Fredericks worked closely with the conservator, Linda Merk-Gould of Fine Objects Conservation, Inc., to facilitate the successful removal, conservation, and reinstallation of the bronze elements, and the restoration of the auxiliary granite groups, the fountain basin and plumbing (figure 3). Richard Kaplan, JVJ's project architect, orchestrated a sensitive, award-winning renovation of the plaza. The fountain was rededicated on Memorial Day in 1992.

For the fountain itself, and for the men and women memorialized by it, the long-term maintenance provisions of the lease agreement may be more important than the actual restoration work. The contract granting JVJ the right to construct the underground parking garage and use it for 99 years obligates the corporation to maintain the city-owned plaza and memorial during that period. It is certainly in the best business interests of JVJ to keep the plaza in front of its hotel and office building clean, and to insure the ongoing operation of the huge illuminated fountain. It is also in the civic interest to finance the maintenance of this public space without drawing on the public purse. Cleveland's politicians, entrepreneurs, architects, and arts managers have fashioned an agreement that meets the needs of the diverse constituencies of the monument and its site—one that could serve as a model for other communities attempting to create public/private partnerships to preserve public art.

Throughout the impassioned public discussion of the fate of the fountain and the future of downtown Cleveland, Marshall Fredericks remained involved although he was in his 80s and

3. Colossal bronze figure, Peace Arising from the Flames of War, *from the* Fountain of Eternal Life, *being re-installed following its conservation in 1992. Photo by the author.*

still at work on numerous other sculptures. From his studios in suburban Detroit the artist advised those who sought his counsel and he responded to the news media. Fredericks fought to save his sculpture from removal, destruction, relocation, and inappropriate alteration.

Unlike most war memorials, the *Fountain of Eternal Life* contains no militaristic imagery. It is perfectly pacific. No statues of infantrymen, cavalrymen, artillerymen, or sailors surround the central figure like they do in countless Civil War memorials. The four auxiliary sculptures represent the four great civilizations of the world through benign religious and mythological imagery. On the sphere are a turtle, swans, a phoenix, the sun, and numerous other symbols of eternal life from cultures around the world.

Like the hundreds of other sculptures produced by Fredericks during his career, the *Fountain of Eternal Life* fulfills the artist's professed goal "to encourage, inspire, and give happiness." He has commented that he does not believe any mother, brother, or child of a fallen soldier wants to see weapons or scenes of war when they visit a memorial to their loved one. Consequently, Fredericks remains vigilant as veterans of Vietnam and the Persian Gulf strive to add statues of soldiers, and narrative relief sculptures, on the four sides of the plaza.

The veterans held a design competition and selected a plan by Rolf Kriken to add four sculptural groups to the perimeter of the plaza. They would represent soldiers of World War I, World War II, Korea, and Vietnam. Each heroic-scale bronze figure would be sited within an alcove created by low walls covered with realistic relief sculptures characteristic of that war. The alcoves would serve as anterooms to the central memorial. Viewers would pause in the anterooms to contemplate that statuary before approaching the fountain, which would be clearly visible in the distance.

The design has received preliminary approval by Cleveland's Landmarks Commission and Planning Commission, but the multi-million dollar fund-raising effort necessary to enlarge the memorial is incomplete. Moreover, there is division in the ranks over particulars of Kriken's design and veterans of the various wars do not see eye-to-eye on all aspects of their own leadership, goals, and objectives.

Much remains to be written about Marshall Fredericks' *Fountain of Eternal Life* and its inevitable transformation as a part of the ever-changing urban fabric of a great city. But the verdict is in on the innovative method Cleveland has used to insure the maintenance of the fountain and its plaza for the next century.

Michael W. Panhorst directs the Marshall M. Fredericks Sculpture Gallery at Saginaw Valley State University. He is also the Director of Michigan, SOS!

The Preservation of Outdoor Sculpture and Monuments Workshops

In recent years, many communities have decided to clean and maintain their public monuments, but have discovered that useful information about appropriate treatment methods, planning and contracting for monument care, and funding such projects is hard to find. To help meet this need, the Mid-Atlantic Regional Office of the National Park Service and National Institute for the Conservation of Cultural Property will conduct a series of seven workshops throughout the United States on the care of monuments and outdoor sculpture.

Faculty and participants of the NPS-sponsored course, The Preservation of Outdoor Monuments-1992 pose for a group photo at Chicago's Graceland Cemetery.

During two and one half days of classroom lectures, informal discussions, instructional videotapes and field trips, a faculty of nationally recognized experts will provide practical information on the long-term care of public monuments and outdoor sculpture.

For additional information, contact Dennis Montagna at 215-597-5824. Workshop sites and dates:

Tallahassee, FL [March 9-11]
Portland, OR [April 22-24]
Kansas City, MO [May 18-20]
Portland, ME [June 1-3]
Milwaukee, WI [September 14-16]
Philadelphia, PA [October 12-14]
Oklahoma City, OK [November 2-4]

Dennis R. Montagna

NPS Cares for Gettysburg's Monuments

1. View of the Pennsylvania Monument *at Gettysburg National Military Park [GNMP] from Little Round Top. All photos by the author, unless otherwise indicated.*

More than 400 monuments in granite and bronze, built between the late 1860s and the present, punctuate the 4,000-acre Gettysburg National Military Park in Pennsylvania (figure 1). But their significance goes far beyond simple commemoration of a pivotal battle of the Civil War. These monuments form a vast and important collection that allows us to trace major currents in the development of American public sculpture. In addition, they can tell us a great deal about shifting cultural, social, and political ideas about the Civil War's meaning and its commemoration.

2. Soldiers National Monument *at Gettysburg National Cemetery. Postcard, ca. 1905.*

Gettysburg's monuments are also key elements of a memorial landscape that has been developing for more than 130 years. The beginning of that development is marked by Lincoln's *Gettysburg Address,* delivered in November 1863, while the dead were being buried at the new National Cemetery. Fully realized with the 1869 completion of the *Soldiers' National Monument* that is its focus, the cemetery forms one of the earliest major commemorations of the war's casualties (figure 2).

The largest number of monuments, more than 300 of them, were built during the years near the 25th anniversary of the battle in 1888, along battle lines that had been marked by committees of veterans throughout the 1880s (figure 3). But memorial building has continued throughout the 20th century, most notably with the creation of Confederate memorials along Seminary Ridge beginning with the *Virginia Memorial* in 1917.

3. Visitors view a West Virginia Infantry monument. Postcard, ca. 1905.

Despite the size and significance of the collection, the monuments at Gettysburg had not received concerted curatorial attention during the nearly 60 years of National Park Service stewardship. The Park Service took steps to remedy this situation during the summer of 1989, when the Mid-Atlantic Regional Office asked Robert Powers and me to conduct a condition assessment of Gettysburg's monuments and then design a comprehensive monument maintenance program that could be implemented by trained park staff (figure 4). This article discusses the assessment project and its findings, the history and impact of earlier monument cleaning projects at the park, the design of a long-term maintenance plan for the collection, and the plan's implementation during the past five years.

4. Robert Powers assessing the condition of the 104th New York Infantry Monument, *1888, granite, Robinson Avenue, Oak Ridge, GNMP. Photo, 1989.*

The first step in the assessment project was the design of a field survey form to record information on the condition of each of the 400 monuments, and a database program that would allow us to make sense of it all. The three major areas that we evaluated included the monument's site, its stonework, and its bronze components.

In assessing the condition of a monument's site, two problems appeared fairly often: the ero-

sion of the earthen mounds constructed at the bases of most monuments, exposing the monument's foundation; and encroaching vegetation in areas that are now more heavily wooded than they once were.

As we evaluated the condition of the stone, we first considered its structural integrity and the condition of its mortar joints. Then we assessed less critical cracking and chipping, the type and amount of surface soiling, and the impact of previous cleanings.

5. John Massey Rhind, Brigadier General John Cleveland Robinson Monument, *1917, bronze and granite, detail. Doubleday Avenue, Oak Ridge, GNMP. Photo, 1989.*

Typical areas of structural concern with bronze statuary and relief panels include inherent or stress cracking of the casting, the viability of bolts and other attachments, and the leaching of internal core material through the relatively porous bronze. With few exceptions, the bronzes at Gettysburg were structurally sound. Therefore, the assessment of bronze components was somewhat simpler and generally focused on the amount of surface corrosion, which we found to be relatively minor throughout the park. The more recent monuments showed very early stages of the development of green corrosion products on the most exposed surfaces. But even the most extensive corrosion we found at Gettysburg was fairly superficial (figure 5), not exhibiting the disfiguring streaks, pitting and appreciable surface loss often found on monuments located in more chemically aggressive urban and industrial environments (figure 6).

6. John J. Boyle, Stone Age in America, *1888, bronze, detail. Kelly Drive, Fairmount Park, Philadelphia. Photo taken before conservation in 1982, courtesy of the Fairmount Park Art Association. Photo by Franko Khoury.*

7. J. K. Ellicott, 1st Pennsylvania Cavalry Monument, *1890, bronze and granite, detail. Hancock Avenue, GNMP. Photograph depicts bronze figure being cleaned to bare metal using glass bead peening in 1979. Photo courtesy of GNMP.*

The history of monument cleaning at Gettysburg provided additional information that helped us to plan a program of ongoing care. During the late 1970s, the park embarked upon a restoration program designed to return monuments to a like-new appearance. To achieve this, many of the park's most prominent monuments were cleaned to bare metal by a bronze foundryman who employed glass bead peening, a blasting procedure designed to remove all corrosion products (figure 7).

Bronze surfaces were then given a fairly light chemical patina and polished to create highlights before they received a protective lacquer coating. This method was commonly used in the 1970s. But by 1980, controlled testing of cleaning methods and a greater understanding of corrosion processes revealed that cleaning to bare metal was both destructive and unnecessary. As a result, the conservation field turned to less invasive cleaning measures, and sought to couple more gentle treatments with programs of regular maintenance.

It was at this time, around 1980, that both the City of Baltimore and Philadelphia's Fairmount Park Art Association embarked on conservation programs of their own. These programs called for a simple washing of bronze surfaces with soap and water, followed by wax applications that could be renewed on an as-needed basis.

The cleaning of bronzes at Gettysburg took the same conservative turn and during the summer of 1981, nearly all of the park's equestrian monuments were washed and waxed. But no routine maintenance was ever carried out, and by 1989 the waxes had degraded and pale green corrosion products were reappearing (figure 8). In fact, the park's adoption of gentler cleaning methods was short-lived. By the mid-1980s, park staff was using a variety of treatment methods that included acidic stripping of corrosion products, a reintroduction of glass bead peening, and applications of dense brown chemical patinas.

8. Henry Kirke Bush-Brown, Major General George Gordon Meade Monument, *1896, bronze and granite, detail. Cemetery Ridge, GNMP. Photo, 1989.*

A subsequent moratorium on monument cleaning at Gettysburg allowed us to conduct the condition assessment and then to develop a program that would couple responsible treatment with long-term care. Once the assessment of the park's 400 major monuments had been completed, we carried out stone and bronze cleaning tests to help

9. Tim Fazenbaker, GNMP, carrying out granite cleaning tests on a Pennsylvania infantry monument, October 1989.

us design appropriate treatments and maintenance procedures that could be carried out by trained park staff.

On one of the most heavily soiled granite bases, cleaning was carried out with combinations of detergent scrubbing and pressure washing (figure 9). While not all of the dirt was removed, we concluded that achieving an even cleaner surface was not worth the possible damage that could result from the use of more aggressive cleaning methods.

Bronze cleaning tests used two methods that are designed to provide a surface clean enough to receive a protective wax coating but without damaging the bronze. One of these methods uses pulverized walnut shells as a blasting medium, a process pioneered and developed by Nick Veloz, a conservator in the Park Service's National Capital Regional Office. Briefly stated, this is a low-pressure cleaning method that removes grime and superficial corrosion products, but leaves intact more firmly adhered corrosion products. After cleaning, the surface receives a wax coating applied to a heated bronze surface (figures 10 & 11).

10 & 11. Antoni Popiel, Thaddeus Kosciuszko Monument, *1910, bronze and granite, details during and after conservation. Lafayette Park, Washington, D.C. Figure 10 shows a partially cleaned surface. The proper right side of the face has been cleaned using walnut shell blasting. Figure 11 depicts the same feature after it has been cleaned and received protective wax coatings.*

Instead of a restoration to an imagined original appearance, the objective of this treatment is much more modest: a recapturing of the essential aesthetic qualities that the sculpture once possessed; a fairly uniform dark appearance and good reflective capability. From the standpoint of preservation, the bronze surface acquires a coating that, with reasonable maintenance, will protect it from further degradation. Moreover, the coating can be removed if other treatments are desired in the future.

The other cleaning procedure we tested was the simple soap and water washing that had been used in the conservation programs in Philadelphia and Baltimore since the early 1980s. The wax application mentioned above follows the washing. This cleaning process has been very successful in conserving works, like Gettysburg's, that possess very little surface corrosion.

Following completion of the condition assessment and the cleaning tests, we made recommendations for a comprehensive monument maintenance program for the park, and compiled a treatment manual to guide the work. We suggested that a well-trained 3-4 person monument maintenance staff be established, under the direction of a curator of monuments, to maintain the park's 400 monuments during the spring and summer months. We also advised that the park purchase a hydraulic lift, the only major piece of equipment not already available. We concluded that most of the free-standing figures should receive a walnut shell blast cleaning before they are waxed, but that most of the less-corroded state seals and emblems could be effectively preserved by using the simpler washing and waxing method. Following treatment, each monument would be placed on a maintenance cycle that would include a periodic inspection of the monument's condition, a gentle washing of the stonework as needed, a soap and water wash of the bronze, and a periodic renewal of the wax coating.

We also suggested that maintenance of Gettysburg's monuments should be assisted by the skills of the park's mason to carry out necessary repointing, as well as those of staff members

12 & 13. John Massey Rhind, Brigadier General John Cleveland Robinson Monument, *1917, bronze and granite, details of bronze portrait before and after conservation.*

responsible for landscape maintenance—the latter to be employed to clear damaging volunteer vegetation and to rebuild eroded monument mounds. During the summer of 1990, a five-member work crew carried out a pilot program in monument conservation at Gettysburg. Using the prepared manual that specified the particular treatment needs of each monument, the team carried out treatments on 60 of the park's monuments with very good results.

Among the monuments conserved was the *General Robinson Monument* (figures 12 & 13). Cleaned with walnut shell blasting and then waxed, the statue has regained a lively reflective bronze surface that had been obscured by pale green corrosion products. In addition, it now has a coating that, with periodic maintenance, should protect it from future corrosive attack.

It has now been five years since the completion of the condition assessment and the beginning of Gettysburg's maintenance program. As with almost any program, insufficient funding meant we didn't get all we hoped for. Staffing levels were lower than we had wanted and the new hydraulic lift we asked for in 1989 materialized as a good used cherry picker in mid-1993. However, led almost from its inception by Bill Myers and Lynn Goddard, the program as been a highly successful one. To date, 234 of the park's 400 major monuments have received an initial treatment. A washing and rewaxing of the bronzes treated in 1990 is scheduled for next spring, along with the seasonal start of work on untreated pieces. With appropriate staffing and funding, each monument should have received an initial treatment and be on a schedule of inspection and maintenance by 1998.

In general, our assessment revealed that Gettysburg's collection of monuments has remained in good condition, suggesting that the high level of intervention used in recent years to "restore" selected monuments at the park should be supplanted by relatively simple—and less invasive—conservation treatments coupled with an ongoing maintenance program. These measures seem to offer the best hope for the long-term preservation of an important body of our cultural resources.

Author's note:
Robert Powers and I were assisted in the condition assessment by several NPS colleagues: Reed Engle, Tim Fazenbaker, Kathy Harrison, John Heiser, Tom Myer, Bill Myers, and Susan Sherwood.

Understanding the nature of any previous cleanings or treatments is important if one is to plan for future care. This was particularly true for the Gettysburg National Military Park collection. During the assessment, it became apparent that nearly all of the monuments had received previous treatments, and that most of these treatments seemed to have been carried out quite a while ago. Protected areas of many of the bronzes contained remnants of a dark wax-like coating. Park lore held that the army had coated the bronzes with shoe polish during the years before the Park Service assumed control of the park in 1933. Research of War Department records at the National Archives in Washington showed this to be true. A requisition for 1931 lists the purchase from the *monument allotment* of beeswax, burnt umber and lamp black, the ingredients needed to make a pigmented wax that approximates shoe polish (figure 1). Other documents suggested that the monuments received fairly regular cleaning during the 1930s. A photograph in the GNMP library depicts a monument being washed in 1934 as part of a Civilian Conservation Corps project (figure 2).

—Dennis R. Montagna

12000.55

Balance available to be used for the hire of extra labor as needed and for unanticipated requirements: 900.35

12900.90

GM-3366-P- A-802 - GNP 32

THE FOLLOWING TO BE PAID FOR FROM THE APPROPRIATION "GETTYSBURG NATIONAL MILITARY PARK, PA. 1931-32 (Monument allotment)

Bolts, tire	none		12 gross	$ 5.40	Repair
Beeswax	none		20 lb.	13.00	Tablet treatment.
Sponges	none		2 doz	8.40	Tablet cleaning
Brushes, wire	11	good	2 doz	8.40	" "
✓ Brushes, scrub	2	good	2 doz	2.40	" "
Umber, burnt	none		4 lb.	1.20	Tablet treatment
Lamp black	none		4 lb.	1.60	" "
Stone, (Granite cleaner)	none		55 lb.	30.25	Granite cleaning
				70.65	

GM 3369-P-3235-A-1770

GNP No year

E. E. Davis,
Superintendent

1. Requisition for purchases of materials for monument maintenance at Gettysburg, 1931. National Archives, Washington, D.C.

2. Monument at Gettysburg NMP being washed by Civilian Conservation Corps, 1934. Gettysburg NMP Archives.

Judith Nyhus

Saint-Gaudens National Historic Site Interprets Conservation

Saint-Gaudens National Historic Site in Cornish, New Hampshire, protects and interprets the home and studios of the preeminent American sculptor Augustus Saint-Gaudens (1848-1907). The Site contains the largest extant collection of his original art work, household furnishings, and memorabilia, as well as the art of other family members and of the Cornish Art Colony, a group of artists, writers, architects, musicians, and patrons of the arts who came to Cornish as a summer retreat beginning in 1885.

Inside the Little Studio.

Since designation of Saint-Gaudens as a National Historic Site (NHS) in 1964, the National Park Service has undertaken the conservation of hundreds of objects in the Site's museum collection. It has focused on preventing damage to the objects entrusted to it by adopting sound housekeeping practices and by employing proper handling, storage, and exhibition procedures. For those objects that require more concerted care, the Site has committed itself to an informed conservation program.

To increase public awareness of the Site's conservation needs and responsibilities, the National Park Service and the Saint-Gaudens Memorial (a Board of Trustees established in 1919 and continuing today in partnership with the NPS) organized a special exhibit at the Saint-Gaudens NHS gallery during the summer of 1993. Entitled *Conservation of Collections: Saint-Gaudens National Historic Site Preserves and Protects,* the exhibit addressed the extraordinary human effort and financial resources required to conserve our national treasures. So positive was the public response to this exhibit, that the staff has decided to continue featuring the collection's conservation needs in small, changing displays. In this way, the Site hopes to keep conservation issues in the public arena.

Judith Nyhus is the Collections Manager and Registrar at Saint-Gaudens National Historic Site in Cornish, New Hampshire.

—continued page 46

Saint-Gaudens' Home and Studio. "Aspet" (right), the federal style tavern which sculptor Augustus Saint-Gaudens (1848-1907) converted into his residence. "The Little Studio" (left), a barn converted into a studio in 1885 by Saint-Gaudens and completely remodeled in 1903. Here, many of the sculptor's most famous works are on permanent display. Photo by Jeffrey Nintzel, courtesy of Saint-Gaudens National Historic Site, Cornish, New Hampshire.

Highlights of the Saint-Gaudens Exhibit

Shaw Memorial Plaster Cast

Shaw Memorial before conservation.

Shaw Memorial after conservation.

One focal point in the Site's exhibit was the restoration of a unique, full-sized original plaster cast of the **Shaw Memorial**, the granite and bronze monument to Colonel Robert Gould Shaw and the African American troops that composed the 54th Massachusetts Regiment. Saint-Gaudens completed the plaster cast in 1901 for display at the Pan American Exposition in Buffalo, New York. It remained in Buffalo at the Albright-Knox Art Gallery until 1959. At that time it was donated to the Saint-Gaudens Memorial and installed on the Bowling Green of the gardens. When conservators began their work in 1982, the sculpture was covered with flaking light-green paint. They removed 6 to 8 layers of paint and grime, taking the finish down to the first through the third coats, which were under the original metal leaf. This level was determined by careful paint analysis to coincide with the date of Saint-Gaudens' completion of the work. The surface was consolidated and areas of loss were restored. Then the entire surface of the sculpture was metal leafed and toned to the bronze appearance that the artist had intended.

Technicians prepare to X-ray the Shaw Memorial

X-ray of the Shaw Memorial

X-rays of the Shaw Memorial, taken in 1993 by the National Park Service's North Atlantic Regional Cultural Resource Center, are part of the ongoing monitoring of this original plaster cast. The high humidity levels and fluctuating temperatures of the sculpture's outdoor exhibit space raise serious concerns for the internal iron armature which will corrode in contact with moisture. Corrosion of the armature will cause the plaster to crack as the iron expands, contributing significantly to the deterioration of the plaster. With x-ray technology, conservators are able to observe and collect data on the armature's condition and stability. This monitoring process was illustrated to exhibit visitors with display boards containing photographs like the two above.

Before restoration

During restoration

Parthenon Frieze Plaster Cast

After restoration

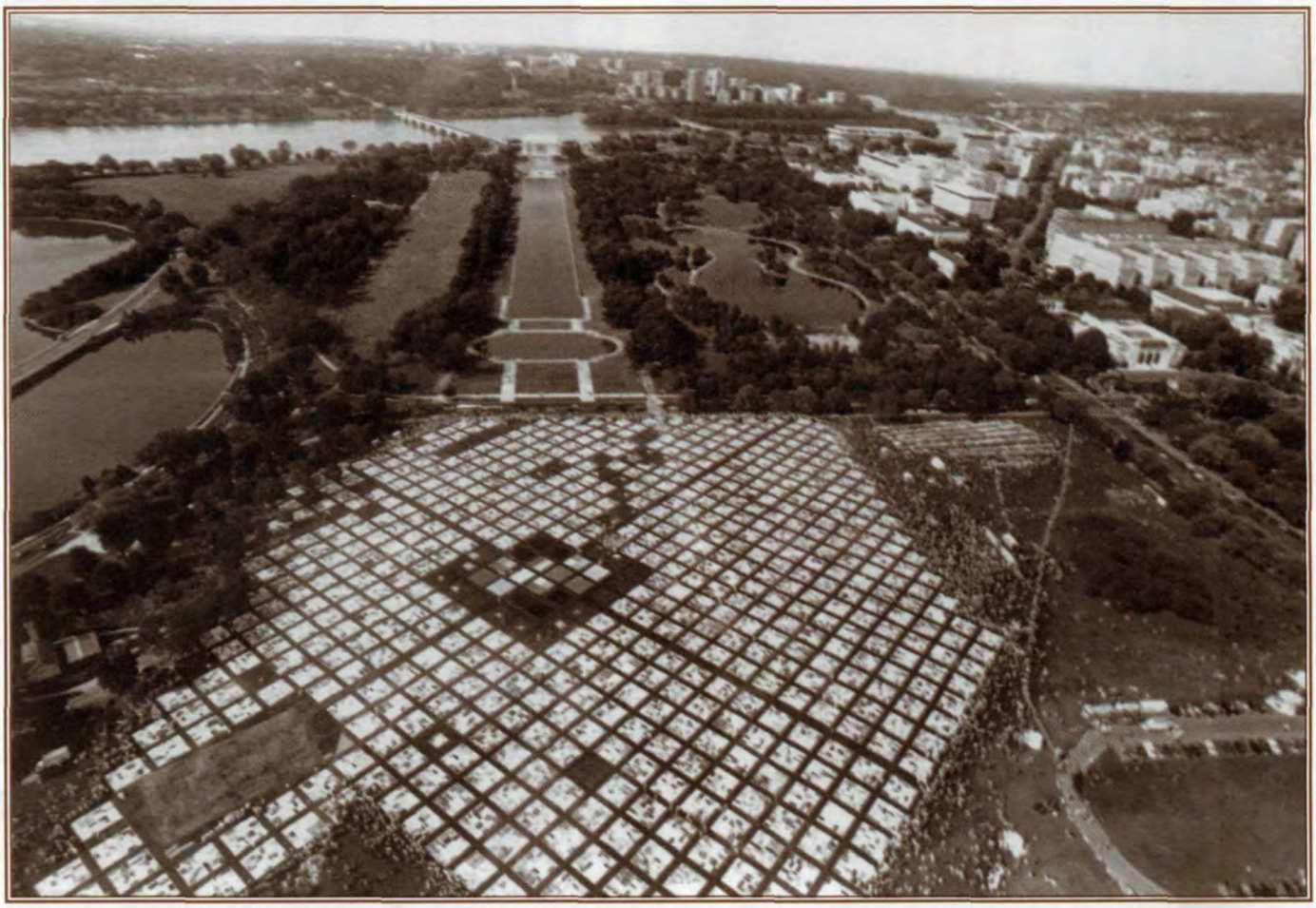
The conservation of the Parthenon Frieze was another focus of the Site's exhibit. The frieze consists of a series of fourteen 19th century plaster replicas (42" x 54') of portions of the marble reliefs from the 6th century BC Temple of the Goddess Athena in Athens, Greece. The casts were made by P. P. Caproni & Brother of Boston and installed by Saint-Gaudens on the Pergola of his Little Studio in 1904. They were polychromed, at Saint-Gaudens request, by Barry Faulkner and Alice Beckington between 1904 and 1907, recalling the coloring used by the ancient Greeks. In 1981, the National Park Service contracted with art conservator, Nick Isaak of Westmoreland, New Hampshire, to restore the badly deteriorated paint on the frieze. The primary goal of the treatment was the consolidation of the original painted surface to preserve as much of the original paint and color as possible. Flaking paint was reattached to the plaster to facilitate moving and touching the surfaces without danger of further loss. Each section of the frieze was removed from the wall and immersed in a bath of resin-based varnish and dried before replacement. The frieze was then cleaned, areas of paint loss were infilled. Restoration work was completed 3 1/2 months later, preserving more than a third of the original paint. Photos by Nick Isaak.

The Seated Lincoln, Chicago

Before conservation

The exhibit also introduced visitors to a wider scope of concerns regarding the conservation of outdoor sculpture. By viewing photographic documentation of Saint-Gaudens' works in various locations around the country, before and after conservation treatment, a number of issues were illustrated. Concerns that were addressed include vandalism at the King Family Tomb [1878] in Newport, Rhode Island, ongoing graffiti problems at the The Seated Lincoln, [1906] in Chicago's Grant Park, as well as the adverse effects of environmental pollution on the Sherman Monument [1903] at Grand Army Plaza and Central Park in New York City. Photos courtesy of the Chicago Park District.

After conservation



Traditionally, monuments have been permanent architectural constructions, but commemoration can take many other forms as well. Composed of more than 29,000 individual memorial panels, The NAMES Project AIDS Memorial Quilt illustrates the enormity of the AIDS epidemic by showing the humanity behind the statistics. Panels are made by friends, family and loved ones of people who have died of AIDS. Portions of the Quilt are displayed over 1,000 times a year to help raise awareness, inspire compassion, and raise funds for people living with HIV. If you would like to know more about The NAMES Project AIDS Memorial Quilt, call 415-882-5500. View of the 1992 Washington, DC display seen from the top of the Washington Monument. Photo by Marc Geller, courtesy of The NAMES Project Foundation.

In Memory of Jeffrey L. Gibson, 1951–1995

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