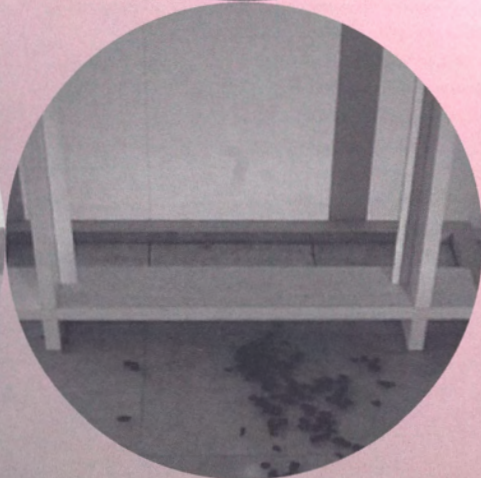
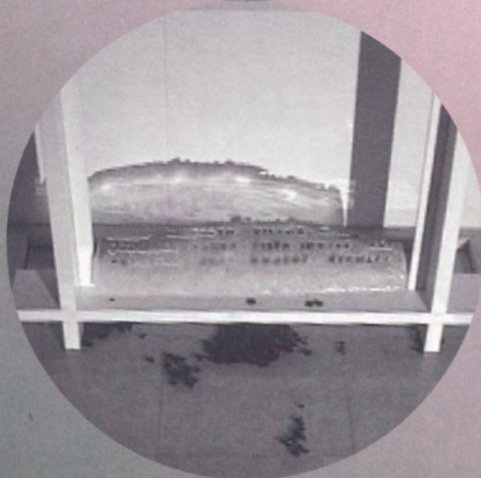


CONSERVATION

The GCI Newsletter



The Getty Conservation Institute Newsletter

Volume 13 Number 2 1998

A Note on the Color: This issue of the newsletter deals with conservation of 20th-century art, much of which has been created with ephemeral materials. For that reason, we have chosen a color for this issue that is susceptible to fading over time in order to illustrate the problem of preserving such works.

Front cover: A series of video images of *Melting Plot*, an ephemeral art installation by French artist Michel Delacroix that was part of the GCI conference "Mortality Immortality? The Legacy of 20th-Century Art." Wax letters spelling out the first names of artists were encased in a block of ice that melted over the course of the three-day conference. The letters came to rest in a pool of water beneath the work. **Photo:** Pedro Pablo Celedón.

Back cover: Globe photo by Dennis Keeley.

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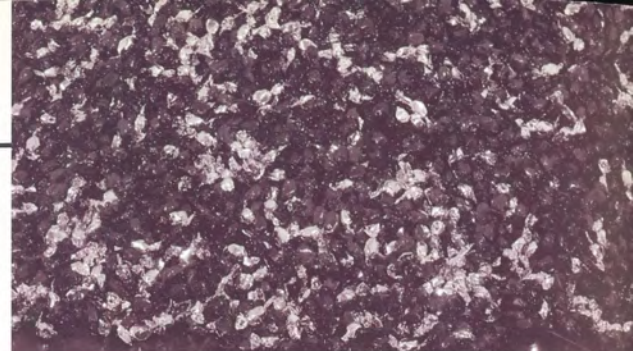
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The Getty Conservation Institute works internationally to further appreciation and preservation of the world's cultural heritage for the enrichment and use of present and future generations. The Institute is an operating program of the J. Paul Getty Trust. Other programs of the Trust are the J. Paul Getty Museum; the Getty Research Institute for the History of Art and the Humanities; the Getty Information Institute; the Getty Education Institute for the Arts; the Getty Leadership Institute for Museum Management; and the Getty Grant Program.

Conservation, The GCI Newsletter, is distributed free of charge three times per year, in English and Spanish, to professionals in conservation and related fields and to members of the public concerned about conservation. Back issues of the newsletter, as well as additional information regarding the activities of the GCI, can be found on the Institute's home page on the World Wide Web:

<http://www.getty.edu/gci>

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4 **Preserving the Legacy of 20th-Century Art**

The art of the 20th century changed the way we look at the world—just as the art itself was affected by all the circumstances and disparities of our time. While art in traditional media is still being created, we now see art of mixed-media components, art of assemblage, and art that is ephemeral—even disposable and repeatable. An eminent curator and art historian examines the preservation challenge of much of 20th-century art and reports on the recent Getty Conservation Institute conference “Mortality Immortality? The Legacy of 20th-Century Art.”

10 **Seeing Things Age Is a Form of Beauty A Conversation with Ed Ruscha**

The noted Los Angeles painter, printmaker, photographer, and filmmaker talks about artistic experimentation with materials and offers his thoughts on the longevity of art and the artist’s role in preservation.

12 **The Conservation of 20th-Century Art Two Case Studies**

In March 1998, leading figures in the contemporary art world gathered at the Getty Center in Los Angeles for the GCI conference “Mortality Immortality? The Legacy of 20th-Century Art.” Two of the papers presented at the conference are excerpted here. Each paper explores a single work of art—one from the first half of the century, the other from the century’s end. While their conservation problems are very different—as is the artistic intent in each case—both works are memorials and thus very much about mortality and immortality.

16 **Canvas of the Millennia**

As we grapple with preserving art from our own time, produced often with ephemeral materials, the challenge remains of preserving humanity’s oldest art, made often with the most enduring of materials. Vast numbers of rock art sites have survived in the Americas, Australia, Africa, Europe, and Asia—evidence of the human urge to create that runs as an unbroken strand back into prehistory. With a recent exhibition and a conservation workshop, the GCI continues its efforts to preserve this notable—though sometimes overlooked—part of the world’s cultural heritage.

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Updates on Getty Conservation Institute projects, events, publications, and staff. Also, a tribute to conservator and teacher Paolo Mora.

PRESERVING THE LEGACY OF 20TH

By Mildred Constantine

ALL THAT REMAINS OF AN

EVENT IN GENERAL HISTORY

IS THE ACCOUNT OF IT IN

DOCUMENT OR TRADITION;

BUT IN ART, THE WORK OF

ART ITSELF IS THE EVENT.

— Bernard
Berenson

THE ART OF THE 20TH CENTURY changed the way we look at the world—just as the art itself was affected by all the circumstances and disparities of our time. The second half of this century saw the breakdown of categories in every aspect of art, altering our concept of what art is. While art in traditional media is still being created, we now see art of mixed-media components, art of assemblage, art that is ephemeral—even disposable and repeatable. Art is no longer a single object but is complex, multiple, divisible, and separable.

Will this art survive? Can the intentions of the artists that created this work be preserved over time? Once art leaves the hands of its creator, it enters the art community. It is exhibited, bought, and collected, and it becomes the responsibility of those persons and institutions in whose care it has been placed. What are the possibilities, limits, and importance of preserving art composed of ephemeral materials? Is contemporary art only for the present? If not, who has the responsibility for its future?

For three days in March 1998, at the Getty Center in Los Angeles, over 350 people listened as 34 speakers grappled with these and other questions in a conference entitled “Mortality Immortality? The Legacy of 20th-Century Art.” Like a painting by the 16th-century Italian Giuseppe Arcimboldo—whose subjects were human heads composed of fruit, flora, and fauna meshed into the unity of a face—the conference merged a diversity of disciplines and opinions to create a dynamic picture of the preservation chal-

lenge of so much of 20th-century art. Philosophical, ethical, art-historical, and technological issues were discussed by artists and conservators, museum directors and curators, art historians and educators, philosophers, collectors, dealers, scientists, and lawyers.

Organized by the Getty Conservation Institute, the gathering grew out of discussions I had over the years with the director of the Institute, Miguel Angel Corzo, who had questions similar to mine. As he put it, “How will our time be remembered? What evidence will be left of the 20th century’s creative spirit for future generations to ponder? These issues are as important to conservation as more traditional areas of inquiry.”

While other conferences on the conservation of 20th-century art had been held, there had not yet been a comprehensive conference that included the full range of disciplines and views that the subject demanded. With the century drawing to a close, this seemed to be the moment to assess what our cultural legacy would be and how the fugitive materials that compose so much of contemporary art would survive—or even if they should survive.

FUGITIVE MATERIALS

I first heard the term *fugitive materials* some 50 years ago at the Library of Congress, when I worked at the Archives of Hispanic Culture. The term referred to materials that did not fit into traditional archival categories:

-CENTURY ART

A 1990 work, *Untitled*, by Félix Gonzalez-Torres. A part of the collection of the Museum of Modern Art in New York, the sculpture consists of about 136 kilograms (300 pounds) of red, silver, and blue wrapped candies. The artist intended that viewers be encouraged to take a piece of candy. *Photo: Courtesy the Andrea Rosen Gallery.*



photos, posters, prints, books, catalogues, letters, manuscripts, and published articles. These errant items, mostly pieces of paper, included handwritten doodles and jottings—odd assortments of words, images, and scribbles combined. Many years later, as a curator at the Museum of Modern Art (MOMA) in New York, I recognized and cherished these transient items. Meant perhaps to be discarded, they nevertheless became the fugitive collections in the holdings of the museum, with meaning to be found in their tales.

Today we speak of fugitive art. Unlike the industrial object, fugitive art is not created for planned obsolescence (although some art has such an aim) but is fugitive because of its use of nontraditional materials and techniques. In the five decades that separate Ralph Mayer's classic *The Artist's Handbook of Materials and Techniques* from "Saving the

20th Century: The Conservation of Modern Materials," a 1991 symposium sponsored by the Canadian Conservation Institute (CCI), the use of nontraditional materials in art has exploded.

Many of these materials come from the modern industrial world, not the traditional world of the artist. Materials such as rubber, plastic, plywood, polyurethane, and modern metals (aluminum and steel) are often used in unpredictable combinations. As David Grattan of the CCI has noted, "Polymers in the form of plastics, rubbers, or textiles cause major headaches for museums. Their instability and unpredictability make the work of conservation, display, and storage a difficult challenge."

Artists often use ruined and unusable detritus of our industrial and technological society, incorporating such material into works of art. As a result, the traditional division of art according to materials and techniques is no longer valid.

My work as an art historian and a curator has given me experience with the problems of caring for works of art composed of ephemeral materials and produced in new and different ways. It seemed to me that the pursuit of solutions to these problems had to be based on a philosophy of inclusionism—in other words, an understanding of the multiple issues facing the wide range of practices and disciplines involved with art. The preservation of 20th-century art was not simply a matter for curators and conservators. There were technical *and* philosophical concerns that had to be

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SOME VOICES
FROM THE
CONFERENCE
“MORTALITY
IMMORTALITY?”

“Nothing is sacred, little is safe, and the best way to preserve valuable objects is to bury them underground, the way the pharaohs did, never to see the light again.”

—Helen Escobedo, Artist

“It is . . . never the material alone that we want to preserve, but the intrinsic, symbolic quality of the work of art more or less engrained or bestowed on the material.”

—Jurgen Harten, Director, Kunsthalle Düsseldorf

“Over 30 years of collecting, my willingness to lend has changed both in being more generous and more reluctant when it comes to conservation considerations.”

—Agnes Gund, Collector

“Works of art, like human beings, are fated to live dangerously to fulfill themselves. . . . In the end, there is no alternative to our acceptance of mortality—for individuals, generations, and the objects that represent them.”

—Thomas M. Messer, Director Emeritus, Solomon R. Guggenheim Foundation

“Not all contemporary art will survive, nor is intended to.”

—Debra Hess Norris, Director, University of Delaware/Winterthur Art Conservation Program

“Permanence/impermanence . . . nothing could better describe the paradox of a human being, the nature of our institutions—social, political, and religious—and crystallize the very essence of the human condition.”

—Bill Viola, Artist

“If between a quarter and a fifth of the photographic art that’s been made over the last 20 years is still around 800 years from now, there will be something grievously wrong with human culture.”

—Peter Galassi, Chief Curator, Department of Photography, Museum of Modern Art, New York

“The law fails where the nature of a given work is its change, and/or where the artist objects to the work being preserved in its original form.”

—Thomas Dreier, Max Planck Institute for Foreign and International Patent, Copyright, and Competition Law, Munich

“I think it’s okay to make the piece oddly, strangely, or use some nontraditional material, but I think that if there is a bond between artist, collector, museum, and that whole succession of work, then the artist has to do everything possible to arm the next recipient of the work with the ability to maintain the work.”

—Cliff Einstein, Collector

“[French philosopher and historian] Etienne Gilson summed it up quite well when he wrote,

‘There are two ways for a painting to perish. One is for it to be restored; the other is for it not to be restored.’”

—James Coddington, Chief Conservator, Museum of Modern Art, New York

“All life is an argument over matters of taste, as Nietzsche wrote, but then he was mad, wasn’t he?”

—R. B. Kitaj, Artist

Near right: *Wall Drawing #601*, a 1989 work by Sol Lewitt. Produced with a color ink wash, the actual painting is done by a crew consisting mostly of artists. The work is both disposable and repeatable—it can be painted over, moved, or repainted by the owner (in this case, the Des Moines Art Center). *Photo:* Courtesy the Des Moines Art Center.

Far right: *Manhattan/New Jersey View*, a mixed-media piece by Glen Kaufman. This 1988 artwork is composed of handwoven silk twill, silver leaf, screen print, and impressed metal leaf. *Photo:* Tom Grotta, courtesy Brown/Grotta Gallery.



Robert Irwin, Artist
Inscription in the Getty Center's Central Garden, which he designed



every fiber substance used in the composition of each work in order for it to be accepted into the collection. As a curator, she was inhibited in making acquisitions if substances could not be identified—or if the identified substances did not, after investigation, yield sufficient information for the curator-conservator to be able to confirm its properties. Even so, there are works in the Institute’s collection that lack this information.

The use of mixed media proliferates in contemporary art—and photography is often an element. Peter Galassi, chief curator in the department of photography at MOMA, devoted an entire exhibition—entitled “More Than One Photography”—to the ubiquitous use of photography in the work of artists in other media. “Given the sprawling variety of photography’s guises in contemporary art,” he noted, “it should be no surprise that photographic works have been collected by all of the museum’s six curatorial departments.” An example of the innovative use of photography can be found in the work of Glen Kaufman, a professor of art at the University of Georgia, whose recent work includes images of architecture in gold and silver leaf which float behind grids on silk panels woven by the artist.

Jean-Yves Mock, the retired curator of the Georges Pompidou Art and Cultural Center in Paris, expressed to me his view that the so-called fragility of contemporary art found in mixed media should not be feared because there are so many avenues of research and cooperation with science and industry. He felt strongly that we should accept

the aging of materials and approach conservation problems from a practical standpoint. He also stressed that the burden of responsibility for the preservation of contemporary works of art lies more with living artists than with the institutions that house their work.

Of course, some artists clearly intend that some of their art vanish and then be reconstructed. A piece by the late Félix González-Torres in the collection of MOMA consists of a pile of candy. Robert Storr, curator in the painting and sculpture department, explained that the work “is of a semidisposable nature inasmuch as the audience is encouraged to take the pieces of candy that compose this floor sculpture. As a result, during the course of the exhibition, the piece disappears in stages and then entirely and eventually must be reconstituted with new candies.”

Sol Lewitt, a central artist in contemporary art, has produced drawings and paintings on walls in museums which he accepts may eventually be painted over, moved, or repainted by the owner (the actual painting is done by a crew consisting mostly of artists who also do the repairs and restorations). The idea for these works came to him in the 1960s, when he didn’t want to produce objects—that is, framed canvas paintings that were commodities. He did not consider the colored wall to be an object and therefore it was less salable, even noncommercial. Like many installations, the work is both disposable and repeatable. Although he acknowledges that when the work is reconstructed, there might be slight variation, he makes an analogy to a musical

composition, which can be interpreted by many different performers.

Artists may actually intend that their work be temporary and *non-repeatable*. In 1997 Andy Goldsworthy was commissioned by the Getty Research Institute to produce a temporary, site-specific installation for their reading room. He chose to create a clay artwork consisting of material found on the Getty Center site, a piece he expected to change in appearance following its installation. “I wanted cracks that were not an aesthetic decoration on the piece, but real cracks,” he told me. In the end, he was surprised at the amount of cracking, but pleased by it as well. “It’s a feeling that you’ve released something that you’re not really in control of, and you don’t know where it’s going to end. That happens to me all the time in my ephemeral work.”

These conversations—and many others—confirmed the virtue of convening a multidisciplinary gathering to address the provocative questions of preservation. The nonuniformity of voices needed exposure to clarify the immensity of philosophical, ethical, and technological challenges that confront us in preserving 20th-century art.

JOURNEY INTO HISTORY

The purpose of the March 1998 conference at the Getty Center was not to answer questions but to explore them. The first question was whether contemporary art was only for contemporary times. There seemed to be an overall

“MORTALITY
IMMORTALITY?
THE LEGACY OF
20TH-CENTURY
ART”

SPEAKERS

Judy Chicago

Artist, writer, feminist, and intellectual

James Coddington

Chief Conservator, Museum of Modern Art, New York

Arthur C. Danto

Johnsonian Professor of Philosophy, Columbia University, and art critic for The Nation

Catherine David

Artistic Director for Documenta X 1997, Kassel, Germany

Thomas Dreier

Senior Researcher, Max Planck Institute for Foreign and International Patent, Copyright, and Competition Law, Munich

Cliff Einstein

Collector of contemporary painting and sculpture

Helen Escobedo

Environmental sculptor

Peter Galassi

Chief Curator, Department of Photography, Museum of Modern Art, New York

Erich Gantzert-Castrillo

Chief Restorer, Museum für Moderne Kunst, Frankfurt am Main, Germany

Daniele Giraudy

Conservateur en chef du Patrimoine chargée du *xx^e siècle*, Laboratoire de Recherche des Musées de France

David Grattan

Acting Manager, Conservation Processes and Materials Research Division, Canadian Conservation Institute

Agnes Gund

President, Museum of Modern Art; private collector

John G. Hanhardt

Senior Curator of Film and Media Arts, Solomon R. Guggenheim Museum, New York

Jurgen Harten

Director, Kunsthalle Düsseldorf

Sheila Hicks

Textile and fiber artist

David Hockney

Artist in painting, photography, drawing, and printmaking

Ysbrand C. M. Hummelen

Head, Department of Conservation Research, Central Laboratory for Research of Objects of Art and Science (now the Netherlands Institute for Cultural Heritage), Amsterdam

R. B. Kitaj

Painter

Thomas M. Messer

Director Emeritus, Solomon R. Guggenheim Foundation

Keith Morrison

Dean, College of Creative Arts, San Francisco State University

Debra Hess Norris

Director, University of Delaware/Winterthur Art Conservation Program

Francis V. O'Connor

American art historian

Roy A. Perry

Head of Conservation, Tate Gallery, London

Charles Ray

Performance artist, sculptor, and photographer

Thomas F. Reese

Deputy Director, Getty Research Institute

Laurel Reuter

Director, North Dakota Museum of Art

Paul Schimmel

Chief Curator, Museum of Contemporary Art, Los Angeles

David A. Scott

Senior Scientist, Getty Conservation Institute

Joyce Jane Scott

Visual and performance artist

Robert Storr

Artist; Curator, Department of Painting and Sculpture, Museum of Modern Art, New York

Ann Temkin

Muriel and Philip Berman Curator of 20th-Century Art, Philadelphia Museum of Art

Bill Viola

Video and electronic media artist

Donald Young

Art dealer, Seattle

MODERATORS

Stephanie Barron

Senior Curator, Modern and Contemporary Art, and Vice-President of Education and Public Programs, Los Angeles County Museum of Art

Bill Berkson

Director of Letters and Science, San Francisco Art Institute

Susan Cahan

Curator, private collection of Eileen and Peter Norton, and Director of Arts Programs, the Norton Family Foundation

Right: Mulholland Drive: The Road to the Studio, a large 1980 acrylic painting by David Hockney. The work is part of the collection of the Los Angeles County Museum of Art, purchased with funds provided by the F. Patrick Burnes Bequest. Photo: Courtesy the Los Angeles County Museum of Art, © David Hockney.

Below: A 1997 sculpture by Andy Goldsworthy. This temporary, site-specific installation in the Getty Research Institute was produced with clay from the Getty Center site. The natural cracking as the clay dried was an effect desired by the artist. Photo: Leslie Rainer.





concurrence with the sentiments expressed by Roy Perry, head of conservation at the Tate Gallery in London: “If we do not preserve the art of today for tomorrow’s audience, their knowledge and experience of our culture will be, sadly, impoverished.”

Artist Judy Chicago declared that values are passed on through “value-laden icons” and that these things need to be preserved. “If we are really going to have a diverse society, a global society, our museums have an obligation to begin to both acquire and preserve a diverse view of the human experience through those objects.”

Still, there was the general recognition that not everything could be preserved. How then can we determine what is most important to leave to the future? Arthur Danto, professor of philosophy at Columbia University, observed that it is impossible to know what the future’s perspective on the present will be. “We cannot bring into self-consciousness the truths about the present that only the future will know. The question of what we ought to conserve—if we mean to preempt the consciousness of the future—is therefore inherently unanswerable.” The best one can do, he said, is to preserve what is meaningful to us now. “That makes conservation a highly political matter—political in the sense that people who are advocates for preserving *this* have to encounter people who are advocates for

preserving *that*, and it has to be negotiated.”

The issue of the political nature of preservation led to several exchanges between speakers as to the reasons a work of art survives. Artist David Hockney maintained that “love” was the reason things are preserved. “It is love,” he said, “that makes us pick the things that will last—that’s all. It might start with an individual. It might start with a group of people. But without love, the object wouldn’t be there. Love will decide what is kept, and science will decide how it is kept.”

The conference examined a number of other topics, including the challenge of preserving art created with non-traditional materials and assembled in nontraditional ways. One area of contemporary art that received a good deal of attention was work that uses electronic media. In this new area, John Hanhardt, senior curator of film and media arts at the Solomon R. Guggenheim Museum, urged that collecting institutions work closely with the artists that created the work. “It is essential that the museum play a leadership role in recognizing film and the media arts as art forms and ensuring the conservation and preservation of these media.”

The conference also looked at the art “ecosystem”—the different hands a work of art may pass through once it leaves the studio of the artist and moves on to dealer and

collector, curator and conservator. The creation of a work of art is only the start of its life. As Laurel Reuter, director of the North Dakota Museum of Art, related, “working in North Dakota, I have come to accept that almost always the art that I show is at the beginning of its journey into history.”

The last session of the conference focused on the issue of responsibility. Who, in the end, will decide what will be preserved and how? This was not a question that the conference speakers—or those gathered to hear them—could answer definitively or with unanimity. The desire, instead, was that this be the beginning of an ongoing conversation within a broad community. With the publication of the conference papers by the GCI at the end of this year, it is hoped that the conversation will grow to include many more participants in the effort to preserve the legacy of 20th-century art.

*Mildred Constantine inspired and helped organize “Mortality Immortality?.” She is an art historian and curator with a special interest in contemporary art. She has curated more than 30 exhibitions and is the author and coauthor of several books, including **Beyond Craft: The Art Fabric**, and **Tina Modotti: A Fragile Life**. Her most recent book, **Whole Cloth**, was published in 1998.*

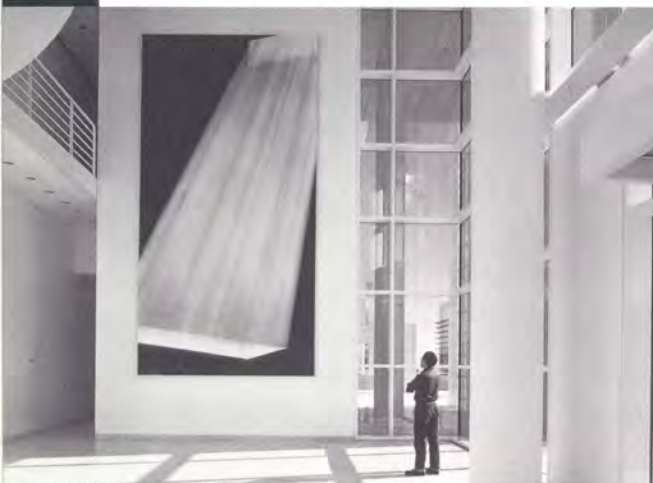
Seeing Things Age Is a Form of Beauty

A Conversation with Ed Ruscha

*Ed Ruscha is a painter, printmaker, photographer, and filmmaker. His most recent large-scale commission, the painting *Picture Without Words*, hangs in the Harold M. Williams Auditorium of the Getty Center, and an exhibition of his paintings and works on paper, curated by Getty Museum Director John Walsh, opened at the Museum in May 1998. Having lived in Los Angeles since 1956, Ed Ruscha is thought of as a quintessential L.A. artist. In the early 1960s, he was associated with the Ferus Gallery group, which also included artists Robert Irwin, Edward Moses, Ken Price, and Edward Kienholz. He later achieved recognition for his paintings incorporating words and phrases. His experimentation with materials has resulted in works of art that, because of their composition, raise a variety of conservation questions.*

Tracy Bartley—a project associate with the Getty Conservation Institute who helped organize the GCI conference “Mortality Immortality? The Legacy of 20th-Century Art”—spoke with him in his studio about these issues and how he feels about the preservation of art created during the latter part of the 20th century.

Ed Ruscha's *Picture Without Words*, commissioned by the Getty Trust. The painting, completed in 1997, hangs in the lobby of the Harold M. Williams Auditorium of the Getty Center. In creating the painting, the artist took several steps to increase the longevity of the work. Photo: Grant Mudford.



■ *Tracy Bartley: Is contemporary art only for contemporary times? Because of the ephemeral nature of many contemporary artists' materials, is it probable that no matter what effort we undertake, a spotty record of our 20th century cultural heritage will survive?*

■ **Ed Ruscha:** Materials, by their nature, are already decaying. Almost any art material you select is going to somehow decay over time. Even if you think about a writer and words, words in their own way decay over a period of time. They're thought of differently today than they were in the 17th century.

That's not the sunniest way to look at things, but art materials are no different. When you think about hard materials like marble, bronze, and other sculptural materials, they all undergo this transformation that you just have to accept as being part of the thing. Oil paint is another example of something that's continually degrading. The sun or light of any kind is going to affect it and add age to it.

It's like how we maintain the human body. We know the human body is not going to live beyond 80 or 90 years. We could be looking at the human body generations from now and come no closer to preserving it than we knew about or pondered at the dawn of civilization. It's going to decay. When it comes to art, you look at traditional materials that have stayed relatively the same for hundreds of years—the way they mixed paints, ground pigments with linseed oil, and carefully followed recipes—and yet ravages of moisture and sunlight and time all give you the problems that you have to face with conservation.

Do you notice this with your own work?

I notice it in little ways. I've done things before that are inherently problematic—what conservators call inherent vice—like using Scotch tape. I knew when I made my collages that the Scotch tape would be the first thing to go,

and sure enough, it was. Even some paper I worked on at one time has totally disintegrated without having been exposed to the elements.

I've been documenting Sunset Boulevard for many years on 35 mm film, and I've called Eastman Kodak to search for ways to preserve film and to store it. Everybody seems to have ideas about what to do. And I know that film is a fugitive material—maybe even more so than paper or other supports.

Film has its own set of problems. Besides the material issues, there are the technological issues: as technology evolves, the film projector that can show your film may become obsolete.

Exactly. I made these films in 1970 and one in 1975, and I haven't done anything in film since then, and I go back today and the language has completely changed. They still work in a projector, but the stability of the dyes and all that makes up the color—they're probably changing even though I keep them in a controlled situation.

No matter what kind of material you use, it's going to face that kind of thing. Now, what artists want, well, that's another thing. Some artists just absolutely do not care about preservation of their work. And sometimes they say they want it to be destroyed—like Tinguely's machines that destroy themselves.

Do you think that artists have a responsibility to ensure that their work has a future?

I don't know. Anybody's approach is a valid one, as far as I see it. You might find artists who say, “I don't want my work to be around in 150 years.” Well then, I say, “What's the purpose of the whole mess if you don't want anything to be around?” It's like taking your most precious heirlooms and throwing them in the trash. If you want life to end, well then, end it.

I don't do it out of any heart-thumping responsibility, but I feel I should keep my work as preserved as possible.

Do you want to see the work maintained as it was when you finished it, or do you accept the fact that it has a life of its own and is going to change?

I accept it. Here I am: I've lived it, and this is the way I look. And so paper is going to look the same way. I like that look. You can look at a Kurt Schwitters collage and you can tell that those papers are really from the 20s, and they've aged, and the inks that were used on the papers have aged. This makes up what it is today. It would be strange to look at a collage done back in the 20s if you saw it like it was when it was made. You'd be disoriented. You'd say, "My, this looks clean." The colors would be real crisp and bright, and the paper would be bright white. Paper just changes with time. When you look at the paper, you see that it has aged over the years, and that actually makes it quite what it should be. It's lived an age, like a person who's 85 years old.

Do you think that the change in materials can go too far and you can lose what the piece originally was about?

Well, yes—then you ask yourself how well could you preserve something like that? Should you take that piece of paper that has a collage on it—and all the other materials, including the adhesives used to paste them down—and hermetically seal it in a chamber of some sort, like an anti-aging chamber? You'd still have the problem that 70 years had passed. Something would look different from how it looked when it was made. When I see paintings on paper that were done even in the 50s—Abstract Expressionists' work, where there have been years for the oils to migrate into the paper—the stain looms out, and you see that. Seeing things age is a form of beauty. I'm always looking at paintings and works on paper from years and years ago, and I really kind of appreciate the aged look to them.

If something deteriorated to the point where it couldn't be shown, would you want it remembered through photographic documentation? Do you think that it's important that there's documentation in cases where

materials are transient?

I do have things that were destroyed for one reason or another that I photographed, and I feel good about that. The idea of documenting to preserve a record of what you did is a valid one, and I've done it for a long time. It's very presumptuous, though, in a way—how do I know how valuable this thing is to the public?

Why should I save it? For that matter, art is priceless and worthless at the same time! As an artist, I've accepted the idea of caring for my work—to ensure the longevity of the work. I've done that, but I'm not a fanatic about it.

So you wouldn't let it determine what material you chose or how you work.

If I did, I wouldn't have used a lot of materials. I did a lot of works with food that changes. I don't think it's an obligation of the artist to choose materials that are lasting. I just don't think that's important. You can make work out of straw—you can make work out of air, if you want to. You're the artist! That's the freedom of the whole thing. An artist can make anything out of anything. You can use cotton candy.

Somebody once gave me a gift that was a fresh fish on a plate. It was a birthday gift. And he had written around the outside of it and I thought, this is such a great gift, I love this gift. So I put it in the freezer and kept it frozen for 25 years! It stayed in pretty good shape! I finally got rid of it. It was beginning to migrate, let's say.

With your painting at the Getty, Picture Without Words, did you think about the issue of longevity?

I sure did. And the issue is not really complete, as far as I'm concerned. The sunlight makes slashes across the painting that change all the time. And of course, over time, as we know, that can affect the piece. There are shades in place, but they let slivers of light through.

Considering longevity also dictated what kind of support I would paint on because if I had painted it on canvas that was stretched onto a stretcher, over time it would sag because of the weight of the canvas. You'd be restretching it every two years. So we arrived at this idea



Edna Ruscha

of putting the canvas onto a flat, hard surface—we chose aluminum—and that really made the most sense. That's one example of trying to do something that preserves or maintains an image in the most prudent way.

All you can do is address these issues as best you can. I did an independent evaluation of the location. I do that with commissions. I spoke with the curator and several conservators. I tried to assess the spot on the wall and the conditions there. Light was the main thing, and the weight of the painting.

I suppose the longevity of a work is an issue for any commission you undertake.

I did a commission in the Miami Public Library, a whole series of paintings. This was in 1986, and I went back about 2 years ago, almost 10 years later, and I noticed as I walked in that my paintings were okay. Everything looked basically like it did in 1986. But something told me that 10 years had passed. It's weird. There are no scuffs on the wall, it's all very clean, the paint is all the same color—but it's like pushing open a door that doesn't work the same 10 years later; even though the door works perfectly, it doesn't work the same. There are degrees of subtlety on objects that have a few years life on them, and I noticed that going inside.

I don't know what it is—it's something in the air or something. It looks like it's 10 years old. Furniture looks that way. I think paintings look that way. Works on paper and sculpture are the same. It's very curious, amusing. The whole aging thing is amusing to me.



Mud, a collage created by Ed Ruscha in 1965. As the artist anticipated, the Scotch tape used to affix the letters in the collage was the first element of the work to show signs of age. Photo: Paul Ruscha.

The Conservation of 20th-Century Art Two Case Studies

Infinite Columns and Finite Solutions

By David A. Scott, Vladimir Kucera, and Bo Rendahl

IN MARCH 1998, leading figures in the contemporary art world gathered at the Getty Center in Los Angeles for discussion and debate on the many issues surrounding the conservation of 20th-century art. Organized by the Getty Conservation Institute, the three-day conference, entitled “Mortality Immortality? The Legacy of 20th-Century Art,” drew over 350 participants to hear 34 speakers—among them artists, museum directors, curators, conservators, art historians, educators, collectors, dealers, philosophers, lawyers, and scientists.

Two of the papers presented at the conference are excerpted here. The papers explore two very different works of art, one from the first half of the century, the other from the century's end. While their conservation problems are very different—as is the artistic intent in each case—both works are memorials and thus very much about mortality and immortality.

The full version of these papers, along with the others presented at the conference, will be published in book form by the GCI at the end of this year.

CONSTANTIN BRANCUSI'S MONUMENTAL SCULPTURE the *Infinite Column* (sometimes called the *Endless Column*) is a work of art whose creator surely did not intend to be ephemeral. Brancusi, one of the most influential artists of the 20th century, made many versions of the *Infinite Column* in wood and plaster, most over a period of two decades, beginning in 1918. Each consisted of a series of repeated modules, threaded like beads on a wire.

Brancusi always wished to find a site for the ultimate version of *Infinite Column*, and his opportunity finally came in 1937. A group of mothers of Tîrgu-Jiu, Romania, not far from Brancusi's birthplace, approached the artist to build a monument to their children and young men, killed defending a bridge against the German army during the First World War. Accepting no money for the commission, Brancusi conceived of an ambitious assemblage of three related sculptures that would extend through the city. These became *Table of Silence* and *Gate of the Kiss*, both in stone, leading, a mile away, to the towering *Infinite Column*, a slender concertina of repeating elements. Erected in 1937 to a height of 29.33 meters (96 feet, 3 inches), the *Infinite Column* has come to be recognized as one of Brancusi's outstanding achievements.

The technicalities of the work are, however, part of the problem of its restoration and conservation. The structure is sunk 4.6 meters (15 feet) into the ground in concrete and consists of a steel framework with cast-iron modules threaded onto it like large beads, which were then thermally sprayed with brass. The thermal-spraying technology, sometimes referred to as metalization, was developed in Switzerland at the beginning of this century. In this process, a metal powder is forced through a compressor and heated over a flame. The molten particles are used to coat a variety of substrates.

Brancusi's intent was to create a sculpture that would not tarnish like an ordinary bronze but would continue to reflect light, like the polished surfaces of the artist's indoor figures. The thermally sprayed coating is somewhat porous and must be smoothed and polished if it is to appear anything like the golden surfaces that Brancusi used on his small sculptures. The efforts of the original engineers in the construction of this sculpture were extraordinarily praiseworthy. But what they did not realize was that the hand-finished, hand-polished brass surfaces that Brancusi desired would not last long outdoors.



Left: Constantin Brancusi's 1937 outdoor sculpture the *Infinite Column*, in Tirgu-Jiu, Romania. The column reaches a height of 29.33 meters (96 feet, 3 inches) and is composed of an internal steel framework with cast-iron modules—thermally sprayed with brass—threaded over the framework. *Photo:* Vladimir Kucera.

Right: A detail of Brancusi's *Infinite Column*, showing areas of deterioration, including blistering of the sprayed-brass coating and rusting of the underlying cast iron. *Photo:* David A. Scott.

Today the column is a heavily tarnished, tawny brown. The outer brass skin is blistering in places and becoming detached from the cast iron, which itself has begun to suffer from corrosion; plumes of rust can be seen descending from damaged regions of the surface as the cast iron corrodes away. From the carbon-steel interior of the column, large handfuls of rust can be grasped from an inspection hole near the ground. The preservation of the column and its artistic integrity have been neglected and the routine maintenance so essential for the structure's survival has not been carried out.

The sculpture has suffered political abuse as well. The Communists so hated Brancusi that in the 1950s the mayor of Tirgu-Jiu ordered the demolition of the *Infinite Column*. Attempts were made to pull the structure down with horses and ropes—or tractors, according to another account—which failed after days of futile toil. Accounts also vary as to how much damage was caused by the demolition effort. Cracking of the concrete foundations is visible at the base of the sculpture.

Most of us would not be happy allowing this work to rust away in a Ruskin-like acceptance of the death of the art, leaving us only with its legend. Most conservation professionals would agree that preservation or restoration of the column is viable, although it is not conservable in the same sense that an outdoor bronze normally would be. There is no path of minimum intervention for the *Infinite Column*. Either an attempt at restoration is made or the work decays. Eventually, it would have to be pulled down as an architectural folly, a hazard of corroded iron and rusted surfaces.

Some have proposed removing the original sculpture to an indoor location and replacing it with a replica. This is hardly practical: a work of such great height is not amenable to replacement. The cost of preparing a convincing replica and of removing the original to a presently nonexistent indoor location would be prohibitively expensive.



Another option, that of dismantling and restoring the sculpture to an appearance in keeping with the aesthetic of the artist, was ultimately advocated by the International Brancusi Foundation, led by Romanian art historian Radu Varia, who originally approached the Getty Conservation Institute for advice. The GCI began working with the Swedish Corrosion Institute in March 1994, studying the rusting of the internal steel framework of the piece, the corrosion of the iron modules, and the deterioration of the sprayed metallic coating. The team then developed a series of recommendations, bearing in mind that all conservation and engineering work would need to be carried out by Romanian professionals. The final restoration of the *Infinite Column* is in the hands of the Romanians and the International Brancusi Foundation.

In present-day conservation practice, we seek to preserve all vestiges of original material, especially since the brutal restorations of art, in the past, have resulted in the obliteration of the original hand and eye of the creator. However, in the case of the *Infinite Column*, Brancusi's original intention will not be destroyed if an attempt is made to preserve the form and appearance of the sculpture; the essence of the work of art is contained in the shape and dimensions of the cast-iron modules (which must, of course, be preserved).

With regard to the surface of the work, the original aesthetic has been lost as a result of previous recoating efforts. The decision as to what color should be attempted is complicated, given that the original coating no doubt underwent a change in color within a short period after being exposed to the outdoors. The GCI and the Swedish Corrosion Institute have been successful in finding a brass-colored alloy—based on a Swedish coinage alloy of copper, aluminum, zinc, and tin—to replace the copper-zinc alloy that has tarnished badly, and they have recommended the alloy to the International Brancusi Foundation. The team also recommended that, in order to preserve the appearance of this new, thermally sprayed coating, additional protection be provided with an acrylic lacquer and a wax outer coat,

a treatment that, with regular maintenance, should ensure that the sculpture retain a golden hue for several years.

There is room for discussion about what happens with the carbon-steel armature of the sculpture. Should this interior element be replaced when the column is dismantled, or can it be salvaged by scraping away the rust, reconstituting the armature, and reusing it in the reconstruction? Neither option is easy, any more than is the protection of the outer surface of the sculpture.

The problems of restoration are not infinite, but they are formidable. The most mundane is simply the cost. Requirements include about two tons of metal for the exterior coating, liters of organic coatings, hundreds of kilograms of wax outer coating, hundreds of hours of work to move everything safely, several metric tons of stainless steel for a new armature, half a ton of zinc or aluminum, thousands of kilograms of new cement to set the foundations—not to mention the costs of scaffolding, a crane, and labor, including the needed technicians, scientists, and principal organizers. The restoration is clearly much more costly than that of a typical outdoor bronze sculpture.

The case of the *Infinite Column* bears witness to an evolution of materials: from materials known for thousands of years to be suitable for external use, to those of the early 20th century (a time which rashly believed it could do better), to our own time at the end of the century, with its ever-evolving scientifically “approved” materials. We hope these will be an improvement on those Brancusi chose to use, without distorting the artistic message of the *Infinite Column*.

David A. Scott is a senior scientist with the Getty Conservation Institute. Vladimir Kucera is head of research at the Swedish Corrosion Institute in Stockholm. Bo Rendahl is a research scientist at the Swedish Corrosion Institute.

Strange Fruit

By Ann Temkin

Below left: Strange Fruit (for David), created between 1993 and 1998 by New York artist Zoe Leonard. The work—which consists of 302 banana, orange, grapefruit, lemon, and avocado peels with buttons, zippers, thread, wire and sinew needles, plastic, wire, stickers, fabric trim, and wax—is part of the collection of the Philadelphia Museum of Art. Photo: Lynn Rosenthal.

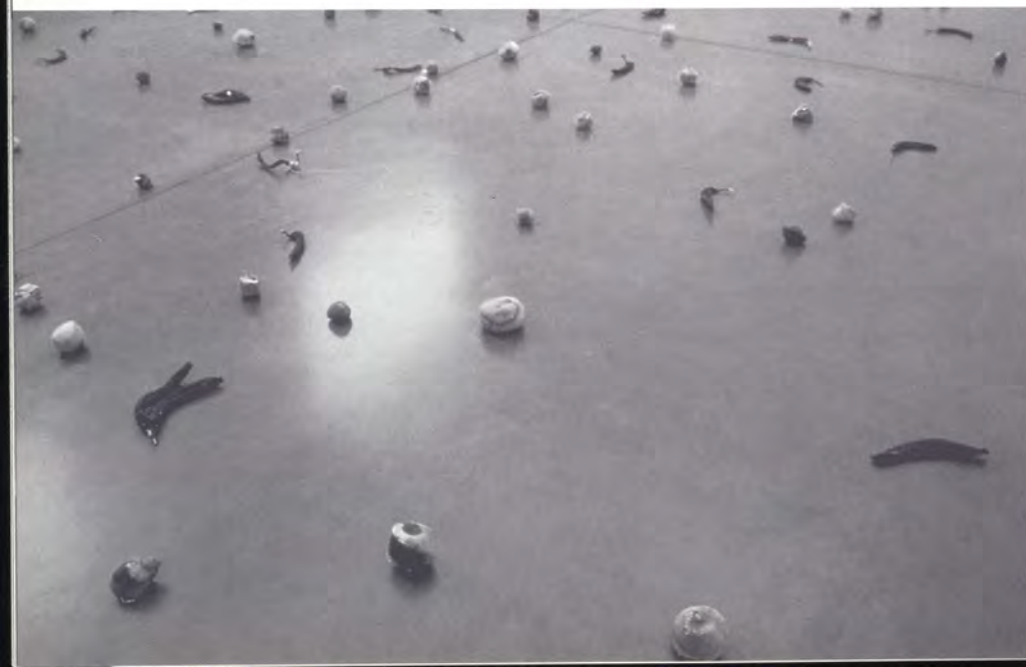
Opposite page: A detail of Zoe Leonard's Strange Fruit (for David). Photo: Zoe Leonard.

THE COUNTERPOINT “MORTALITY/IMMORTALITY” has always provided a theme for works of art. *Vanitas* paintings presented meditations on the transience of life, portraying fruit about to decay, candles soon to melt, flowers ready to fade. These paintings were about death while they themselves were durable objects. What has happened to *vanitas* in the late 20th century? The subject of human mortality certainly has not gone away; the AIDS epidemic has brought it closer than ever to the surface. From Picasso and Duchamp to Schwitters and Rauschenberg, we live in a century that declares that things, rather than symbols, are the stuff of art. A serious work of art cannot, by current definition, “illustrate” death, but it can embody or imply it. Vulnerability and evanescence have determined not only the content but the form of much of the most important art of the decade. And this, of course, presents real dilemmas for collectors, curators, and conservators.

A case study is an artwork that the Philadelphia Museum of Art acquired in February 1998. Entitled *Strange Fruit (for David)*, it was made from 1993 to 1998 by New York artist Zoe Leonard. It is composed of about 300 rinds and skins of avocados, grapefruits, lemons, oranges, and bananas. After the artist ate, or others had eaten, the meat of the fruit, she allowed the skins to dry out and then “repaired” and adorned them, sewing up the seams with colored thread, shiny wires, and buttons. Bananas are closed up with stitches or zippers that run from top to bottom.

Leonard furnished a creation story for the piece, discussing its evolution as a work of mourning after the death of a friend. “It was sort of a way to sew myself back up. I didn’t even realize I was making art when I started doing them. I had just come back from India and was impressed with how each scrap of paper, each bit of wire was used to its maximum, to the very end of its possible useful life. . . . One morning I’d eaten these two oranges, and I just didn’t want to throw the peels away, so absentmindedly I sewed them back up.”

Leonard’s claim that she didn’t even realize she was making art when she began sewing the fruit in Provincetown typifies the rhetoric of 20th-century art, which has sought to erase boundaries between art and life. Eventually the work



seemed to her to be art, and she continued working on it in New York and, later, during two years in a remote part of Alaska, where she mainly had to rely on fruit mailed to her. She first decided to exhibit the fruit in 1995 at her apartment. *Strange Fruit* was later shown at the Museum of Contemporary Art in Miami during the spring of 1997 and at the Kunsthalle Basel that summer.

Early on, her dealer, Paula Cooper, suggested the possibility of preservative intervention for the sculpture. Leonard was amenable and worked for two years with German conservator Christian Scheidemann to devise a way to arrest the decay of the fruit surfaces. After much testing, Scheidemann developed a solution that consisted of shock-freezing the pieces and then penetrating them with Paraloid B72 under vacuum. This solution was complicated by the need to protect the wires, threads, and other elements from the Paraloid B72; in other words, the piece presented the intricacies typical of any mixed-media work. But Scheidemann succeeded in this as well.

However, Leonard found that she recoiled at Scheidemann's hard-won results. She realized that the appearance of decay was not enough for her; the *metaphor* of disappearance was insufficient. I would argue that this was a reaction determined by art history—after Joseph Beuys's sausages and Dieter Rot's choco-

late, the *pretense* of deterioration was no longer persuasive. Leonard set herself a criterion of honesty and rejected the preserved pieces.

When she first heard that the Philadelphia Museum of Art wanted to buy *Strange Fruit*, Leonard was thrilled and grateful. But she soon developed concerns about our willingness to show it continuously, to devote a specific

space to it, and to show it, still, when it became more evidently a ruin. We agreed to try (although we did not formally commit) to show the piece for periods of time with a certain calendrical regularity, which seemed in the spirit of the work's sense of marking time. We agreed to photograph, or permit Leonard to photograph, successive installations, perhaps for eventual publication. We agreed to collaborate with her over the years to determine when the piece was no longer presentable and what should be done with it at that time. Admittedly, this allowance for continued communication with the artist is unusual. However, we live in a time when the museum is much more engaged with its public, so why not with its artists?

What did my colleagues at the museum think? They felt terrific about exhibiting *Strange Fruit* but at first were less sure about acquiring it, because of the implied obligations, particularly of storage and conservation. Interesting to me was the discomfort some had in assigning it an acquisition number. How can you give a

number to something that won't always be there? To me this revealed our collective belief in the sense of permanence bestowed by an inventory. The sense is fictional, of course; an unsettlingly large percentage of numbered objects in our building do not exist as their numbers would indicate: they broke, were sold, are lost, or were designated for practical use and wore out. The assignment of a number does not, in truth, guarantee "forever."

What did our conservators think? Indeed, the piece is a bit of an affront to the profession. It is like bringing to a surgeon a patient with an inoperable disease: next patient, please. But here, too, *Strange Fruit* is very much a work of our time. The heroics of the conservation lab are as much in question as those of the hospital. As medical and conservation technology develops and the number of potentially treatable patients grows, the questions raised by *Strange Fruit* become social questions as much as art questions. For example, is it more graceful and humane to let a person die than to preserve him or her bizarrely and at great expense? Ultimately, the conservators and I shared an understanding of the spirit of the piece. We agreed that the labor-intensive aspect of dealing with it as we normally would—such as thoroughly condition-checking each unit—stretched the bounds of common sense. But we agreed to do certain things, such as devising good storage so that the periods of dormancy would impinge as little as possible on the work's life span.

While Leonard initially did not expect that *Strange Fruit* would end up in a museum, I believe its impact there will be more profound than any she could have imagined for it. In a museum, it often seems, we are dedicated to preserving something larger than individual works of art; we are dedicated to preserving the fiction that works of art are fixed and immortal. Our building is the greatest support for this argument: a seemingly imperishable monument of Vermont limestone constructed in the timeless idiom of the classical temple. In recent years, however, it too has manifested signs of serious deterioration.

The provocation offered by Leonard's work sends a message that reverberates throughout our building. Maybe it is not the only thing in the museum that is not forever. Maybe this is not a universe without wounds, reconstructions, scars, or death.

Strange Fruit is a piece that will alter in appearance in the museum. And for that reason, even though it faces death and portrays death, I believe it may be more alive for viewers than many objects that are apparently fixed and never-changing. Sometimes it's great to get caught up in the fiction of forever and the fiction of certainty. Sometimes it's great to enjoy a pretty Impressionist landscape. But sometimes we're ready to know that there can be beauty in cracks and in loss. Sometimes it's much more of a help to know that everything is changing, is in some way dying, that we do what we can, and that we go on creating.

Ann Temkin is the Muriel and Philip Berman Curator of 20th-Century Art at the Philadelphia Museum of Art.



Canvas of the Millennia

By Neville Agnew



AS WE GRAPPLE WITH PRESERVING ART from our own time, produced often with ephemeral materials, the challenge remains of preserving humanity's oldest art, made often with the most enduring of materials. We call it art—rock art. Certainly, as art, it is frequently powerful. Nobody would deny the strong aesthetic sense of the finely depicted figures and animals painted or engraved on rock surfaces. Nor can we imagine that the artists were unaware that they were creating beauty. But mystery and enigma of meaning are there, too. The art was, it seems, not necessarily or, indeed, ever made as art only for art's sake.

Rock art is found everywhere in the world—in rock shelters in Mexico, on rocks under the blazing Sahara sun, and in deep limestone caverns in France and Spain. When the Palaeolithic art of Lascaux was discovered in 1940, the world was stunned by the artistic power of the images. Increasingly, other European rock art dating from around 15,000 to 30,000 years ago is being found, most recently on engraved rocks that stud the Côa Valley of Portugal. This site was catapulted to international attention by a fight between preservationists and those who proposed construction of a dam that would submerge the sites. The government subsequently canceled the project.

Vast amounts of rock art have survived without the benefit of controlled environments and the solicitous attention of museum specialists. Much must have been lost, but over thousands of sites survive in the Americas, Australia, Africa, Europe, and Asia. The sheer volume of rock art and

its diversity of form—from superbly realistic depictions to stylized abstract forms to complex geometric patterns—tell of the human urge to create that runs as an unbroken strand back into prehistory. The hand stencils typical of some Australian sites are also found near Marseilles in the Palaeolithic cave of Cosquer, cut off by the rise of sea level after the last Ice Age and now accessible only by scuba divers. Such are the commonalities of human expression.

Paintings and rock engravings must have been intensely personal to the artist and the clan and were often secretly located to serve an inward vision. No evidence of individual identity in the artists' work is found, though clearly, to our eyes, the skills of individual artists varied. Like all ancient painting and much other art, there is no indication of a desire to leave any personal identifying mark.

Unlike other antiquities, rock art is not collected and has not become a high-value commodity—yet. Perhaps this is because it is not easily removed, and, intransigently, it often fractures and crumbles when efforts are made to do so. It is integral with the landscape and belongs there. And although attempts, always illegal, are sometimes made to remove particularly appealing panels, more usually the art is vandalized through ignorance.

The long existence of rock art is in contrast to much contemporary art, which already poses a conservation quandary for the curator, collector, and conservator. The March 1998 Getty Conservation Institute conference



entitled "Mortality Immortality? The Legacy of 20th-Century Art" focused on the issues of ephemeral, degradable, and incompatible materials used with great élan by today's artists, who seize upon the myriad new products in experimental and novel ways to create their art. For the primeval painters of rock art, only natural pigments (red, brown, and black ochers), white clays, and charcoals, mixed sometimes with blood, fat, or plant juices as binders, were available. Perhaps most unusual of rock art materials is beeswax, found in a few instances in Australia—the ancients were radical experimentalists with their materials, too! Made with these basic and natural materials, vast amounts of art have endured. But now, tragically, much is being lost through development, vandalism, and misguided attempts at saving the art. Among the harmful practices are wetting rock paintings to temporarily enhance colors—would you throw water on the Mona Lisa?—applying coatings intended to protect, and chalking engraved rocks.

What the art meant to its makers and what we think it might have meant are two very different matters—the subject often of hot debate. Research groups like the Rock Art Research Centre of the University of the Witwatersrand under David Lewis-Williams have developed persuasive interpretations of the San art of southern Africa, based on shamanic and trance experience, that show that the intent was to influence the world: to make rain, to heal the sick, to ensure success in the hunt. The difficulty of interpreting ancient rock art is illuminated by Professor Lewis-

Far left: Cueva Pintada in the Sierra de San Francisco of Baja California. This rock shelter contains a multitude of imagery, including animals of the land and sea, human-like figures, and abstract shapes. *Photo:* Guillermo Aldana.



Near left: Petroglyphs of eland and wildebeest at the site of Springbok Oog in the Northern Cape of South Africa. *Photo:* © David Coulson.

Left: San rock paintings from South Africa. *Photo:* Neville Agnew.

Right: Documentation of a large painted panel in the Didima Gorge, Drakensberg, South Africa. The documentation, by Harald Pager, was done by painting over a mosaic of photographic prints of the panel. *Photo:* Courtesy the Rock Art Research Unit, Archaeology Department, University of the Witwatersrand.



Williams's oft-quoted example: how would a person quite alien to the canons of Western religious art view, say, da Vinci's *The Last Supper*? Of the 13 men at a meal, there is no hint that one is divine, only that he is the focus of the painting. Without knowledge of the symbolism and the narrative point—Jesus announcing that one of his disciples will soon betray him—how could accurate and meaningful interpretation be made?

We face the same problem with rock art. Is this simply a hunting scene? A dance? With the San art, clues are sometimes there: enigmatic lines connect figures, which themselves may have hooves or, more obviously, antelope heads. To aid interpretation, there exists a vestige of ethnographic record. In the 1870s, the German philologist Wilhelm Bleek and his sister-in-law Lucy Lloyd interviewed the last of the San in South Africa, recording more than 12,000 pages of lore. The metaphor for the visionary experience of trance dance has been vividly recorded in recent times by ethnographer Richard Katz in an interview with Kxao ≠ Oah in the Kalahari: "God keeps my eyeballs in a little cloth bag. . . . And now when I dance, on the nights that I dance and when the singing rises up, God comes down from heaven, swinging the bag with eyeballs above my head, and he lowers the eyeballs to my eye level, and as the singing gets strong, he puts the eyeballs into my sockets and they stay there and I heal. And when the women stop singing . . . he removes the eyeballs, puts them back in the cloth bag, and takes them up to heaven."

No such expressive records exist for most of the rock art of extinct cultures elsewhere in the world, although in the art of the U.S. Southwest, use of the ethnographic record is developing and shows that many motifs derive from trance visions. Parallels exist: in the Southwest, it was the bighorn sheep that the shaman associated with the power of rainmaking; with the San, it was the eland, the largest of all African antelope.

Another startling parallel in the rock paintings of Australia, Africa, and Mexico's Baja California is superimposition on earlier art. This is so antithetical to our notions, given the aesthetic quality, as to seem baffling. Only when we realize that what was important to the artist was the act of creating, for the purpose of the moment, does the over-painting begin to make sense.

As counterpoint to the explosive artistic energy of the 20th century, we would do well to remember the astonishing legacy of art on the canvas of primeval man. One month after the "Mortality Immortality," conference, the GCI, with the Kennedy Center for the Performing Arts and the Rock Art Research Centre of the University of the Witwatersrand, opened an exhibition in Washington, D.C., "The Painted Rocks of Africa: Other-World Visions of the San." The success of this exhibition underscores a growing appreciation of rock art among the public, as well as its potential educational message.

The GCI has long been involved in rock art preservation. Over the last decade, the Institute collaborated with

the University of Canberra on a rock art conservation course, held training courses at native American Chumash rock art sites in California, and undertook a project on the rock art of Baja California, studying deterioration and developing with Mexican officials and the local community a management plan for this World Heritage area. In June 1998, the GCI began a series of workshops on rock art conservation with the National Monuments Council of South Africa, the National Museums and Monuments of Zimbabwe, and ICCROM, focused on the 11 southern African countries. Assessment of significance, public awareness, conservation, and training are among the workshop themes. The first meeting was held recently in the Drakensberg region of South Africa, an area rich in San art. Follow-up meetings will occur in other countries—the next being in Zimbabwe in 1999.

In its origins, the "purpose" of all art is to communicate by visual images, as art critic Robert Hughes has noted. Rock art's universality in time and space tells us something about what it is to be human. It reminds us that for the past 40,000 years we have not changed in our essence, that the art of the 20th century is part of this continuum. The need to influence the course of life through the creation of images is one that has persisted—from the artists of Cosquer to those creating now, at the end of this millennium.

Neville Agnew is group director of Information and Communications for the Getty Conservation Institute.

Maya Initiative

The Maya Initiative is a GCI project that seeks to establish a heritage management plan for the Maya region. Its objective is conservation of the heritage through inclusive management planning, better coordination of human and material resources, and the solution of several technical conservation issues.

In July 1997 at the Getty Center in Los Angeles, the GCI convened a meeting of cultural heritage officials from countries in which Maya culture developed: Belize, El Salvador, Guatemala, Honduras, and Mexico. The meeting also included representatives from El Mundo Maya, Fomento Social Banamex, the World Bank, and Banco InterAmericano de Desarrollo, organizations that are either involved in regional matters related to cultural heritage or are interested in their development. Meeting participants recognized the necessity of defining and developing a regional management plan, and the importance of organizing efforts in areas of mutual interest, such as site management planning and scientific and technical research.

The Getty Center meeting was followed by two other meetings, which have led to an official collaboration. The first meeting, in Mérida, Mexico, in January 1998, concluded with an agreement by those present to promote the organizing of a "consortium." The second meeting,

in Antigua Guatemala, Guatemala, in April 1998, solidified the efforts of the Mérida meeting with an agreement establishing an organization that included institutions in charge of the heritage of four of the Maya-region countries; this agreement is the first major milestone of the Maya Initiative. Interinstitutional collaboration, long a goal of these organizations, has become a reality.

Parallel to this development, projects of mutual interest have been identified, and agreements are being drawn up between the responsible countries and the GCI. The area of Yaxhá-Nakum-Naranjo in Guatemala's El Petén region will be the subject of a broad management plan that extends beyond the boundaries of a site and that integrates the site into its environment. At Joya de Cerén in El Salvador, the project will focus on creating a management plan for the site and its environment and investigating the effects of its protective structures and the causes of deterioration of its earthen structures. The Copán site in Honduras will be the object of research on the causes of stone deterioration, the conditions created by the protective structures, a planning methodology for such structures, and the structural stabilization of monuments and tunnels dug for archaeological research or other purposes. Experts from the partner countries will participate in projects outside their own country as part of the effort.

These agreements—and the sharing of information that will grow out of them—form the first step in the creation of a regional management plan. In the future, financial organizations such as the World Bank, which is interested in the initiative, will be asked to support the project's activities financially.

Second Pan-American Course on the Conservation and Management of Earthen Architectural and Archaeological Heritage

PAT99-Project Terra
October 31–December 10, 1999
Chan Chan, Trujillo, Peru

This is an intensive, specialized training course organized by the Getty Conservation Institute, the Instituto Nacional de Cultura del Perú—La Libertad (INC-LL), the International Centre for Earth Construction—School of Architecture of Grenoble (CRATERRE-EAG), the International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM), and the Universidad Peruana de Ciencias Aplicadas (UPC). The course is geared toward professionals in archaeology, architecture, and other disciplines involved with the conservation and management of cultural heritage. Twenty-five to thirty participants will be accepted to the course, which will be conducted in Spanish.

For more information and an application form, contact:

PAT99
The Getty Conservation Institute
1200 Getty Center Drive, Suite 700
Los Angeles, California 90049-1684
USA
Fax: (310) 440-7702

The deadline for application is
December 1, 1998.



Investigating Damage Caused by Salts

The damage that salt crystallization can cause in ancient stone monuments has long been recognized by conservators and conservation scientists. Recent scientific research at the GCI has increased understanding of the ways in which salts can harm cultural heritage. Because of this new work, a wider range of potential mitigation strategies can now be considered.

As part of an ongoing research project, Carlos Rodriguez-Navarro, GCI research fellow, and Eric Doehne, GCI associate scientist, used tools such as time-lapse video and the environmental scanning electron microscope to investigate in detail the behavior of salt-laden stone. The findings from their research help explain why certain salts are more damaging than others and what parameters are likely to be important in determining the extent of the damage. How concentrated the salt solution becomes before the salts crystallize appears to be a key damage factor. Rapid cooling or drying—as the result of wind, for example—was shown to greatly increase damage. Changes in the internal surface roughness of the material may also delay the onset of crystallization. The work also found that the extent of the damage also greatly depends on the properties of the solution, such as its surface tension.

This research opens the way to considering the use of certain materials, such as some surfactants, that might modify the salt solutions and thus reduce the damage they cause. In the meantime, buffering the site of a monument as much as possible from rapid cooling or rapid drying—the result of wind, sun, or low relative humidity—can help reduce the amount of damage from salts. Researchers in Australia, for example, have proposed reducing salt and thermal damage by planting a row of trees in front of a sun-exposed, cliff rock-art site. Another technique is the use of temporary, porous, sacrificial material placed in the area of current damage; this may help move the site of crystallization to above the layer to be preserved.

Much more research is needed to provide a solid foundation of knowledge regarding this complex phenomenon, but future work by the GCI research team and other groups can be expected to shed additional light on these problems. Inquiries regarding the GCI's work can be made directly to Eric Doehne (edoehne@getty.edu). Scientific articles on the research will be added to "Research Webstracts" on the GCI's Web site (www.getty.edu/gci) as soon as they become available.

Painted Wood: History and Conservation

Proceedings of a Symposium at Williamsburg, Virginia, November 1994
Edited by Valerie Dorge and F. Carey Howlett

The function of the painted wooden object ranges from the practical to the profound. These objects may perform utilitarian tasks, convey artistic whimsy, connote noble aspirations, and embody the highest spiritual expressions.

This volume, illustrated in color throughout, presents the proceedings of a conference organized by the Wooden Artifacts Group of the American Institute for Conservation of Historic and Artistic Works (AIC) and held in November 1994 at the Colonial Williamsburg Foundation in Williamsburg, Virginia. The book includes 40 articles that explore the history and conservation of a wide range of painted wooden objects, from polychrome sculpture and altarpieces to carousel horses, tobacconist figures, Native American totems, Victorian garden furniture, French cabinets, architectural elements, and horse-drawn carriages.

Contributors include Ian C. Bristow, an architect and historic-building consultant in London; Myriam Serck-Dewaide, head of the Sculpture Workshop, Institut Royal du Patrimoine Artistique, Brussels; and Frances Gruber Safford, associate

curator of American decorative arts at the Metropolitan Museum of Art in New York. A broad range of professionals—including art historians, curators, scientists, and conservators—will be interested in this volume and in the multidisciplinary nature of its articles.

Conservator Valerie Dorge is a project specialist at the Getty Conservation Institute. F. Carey Howlett is senior conservator for the Colonial Williamsburg Foundation.

Symposium Proceedings series
539 pages, 8⁵/₁₆ x 11¹/₁₆ inches
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The Structural Conservation of Panel Paintings

Proceedings of a Symposium at the J. Paul Getty Museum, April 1995
Edited by Kathleen Dardes and Andrea Rothe

This volume presents the proceedings of an international symposium organized by the Getty Conservation Institute and the J. Paul Getty Museum. The first conference of its kind in 20 years, the symposium assembled an international group of conservators of painted panels and gave them the opportunity to discuss their philosophies and share their working methods.

Illustrated in color throughout, this volume presents 31 papers grouped into four topic areas: "Wood Science and Technology," "History of Panel-Manufacturing Techniques," "History of the Structural Conservation of Panel Paintings," and "Current Approaches to the Structural Conservation of Panel Paintings."

Contributors to the volume include David Bomford, senior restorer of paintings, National Gallery, London; R. Bruce Hoadley, professor, Wood Science and Technology, University of Massachusetts at Amherst; Ian McClure, director, Hamilton Kerr Institute, Cambridge, United Kingdom; Jørgen Wadum, chief conservator, Mauritshuis, The Hague; and Ciro Castelli, restorer, Opificio delle Pietre Dure e Laboratori di Restauro, Florence, Italy.

Kathleen Dardes is a project specialist at the Getty Conservation Institute. Andrea Rothe is conservator-in-charge at Paintings Conservation at the J. Paul Getty Museum.

Symposium Proceedings series
588 pages, 8 1/2 x 11 1/8 inches
103 color and 353 b/w illustrations
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ISBN 0-89236-384-3, paper, \$85.00



Inert Gases in the Control of Museum Insect Pests

By Charles Selwitz and Shin Maekawa

A serious problem facing museum professionals is the protection of collections from damage due to insects. This book describes successful insect eradication procedures developed at the Getty Conservation Institute and elsewhere, whereby objects are held in an atmosphere of either nitrogen or argon containing less than 1000 ppm of oxygen—a process known as anoxia or oxygen deprivation—or in an atmosphere of more than 60 percent carbon dioxide.

Techniques, materials, and operating parameters are described in detail. The book also discusses the adoption of this preservation technology, the development of these methods, and instructions for building and upgrading treatment systems, as well as recent case histories.

Charles Selwitz is a scientific consultant and the author of *Epoxy Resins in Stone Conservation and Cellulose Nitrate in Conservation*. Shin Maekawa is a senior scientist at the Getty Conservation Institute.
Research in Conservation series
150 pages, 8 1/2 x 11 inches
14 illustrations and 20 line drawings
ISBN 0-89236-502-1, paper, \$25.00

Oxygen-Free Museum Cases

By Shin Maekawa

A challenge in protecting and displaying environmentally sensitive objects is preventing deterioration caused by the presence of oxygen. This volume describes the design and construction of an oxygen-free, hermetically sealed display and storage case developed by the GCI for the long-term protection of such objects. The case was originally designed as a collaborative project between the Egyptian Antiquities Organization and the GCI to conserve the Royal Mummy Collection at the Egyptian Museum in Cairo.

Seven chapters cover the protection of cultural objects from environmental deterioration by reducing exposure to oxygen and by using inert gases for biodeterioration control. Also included are details on how the design and construction of the oxygen-free case have been adapted for other applications—specifically, for the original documents of the Constitution of India in New Delhi and for the mummy collections at the Egyptian Museum and at the Museu Víctor Balaguer in Vilanova i la Geltrú, Spain.

Shin Maekawa is a senior scientist at the Getty Conservation Institute.
Research in Conservation series
100 pages, 8 1/2 x 11 inches
45 b/w illustrations
ISBN 0-89236-529-3, paper, \$30.00

The Agora



TWO AREAS OF INQUIRY have been included in the Agora—the new GCI initiative that is exploring philosophical and societal issues regarding the conservation of cultural heritage. Through interdisciplinary meetings and exchanges, the Agora will study and debate the values and benefits of cultural heritage and its conservation, as well as examine their economics.

The values-and-benefits inquiry will last approximately two years and conclude with a large conference in the year 2000. Individuals from various professions and cultural backgrounds will participate in Agora symposia and research activities that will synthesize present thought regarding the values and benefits of cultural heritage and consider ways to increase understanding of the benefits that the conservation of cultural heritage brings to society.

The inquiry was launched with a meeting in Los Angeles and Riverside, California, on January 14 through 16, 1998. The meeting was attended by a multinational group of professionals and academics, some from the conservation and cultural heritage fields, others from associated disciplines. Participants examined the multiple definitions, roles, and meanings of cultural heritage.

Intertwined in the discussion of cultural heritage as a concept were the various perceptions of values and benefits. It was argued that the different benefits of heritage conservation flow out of the correspondingly different ways to value heritage. Derived benefits often influence perceptions of value and thus of meaning, making the separation of these notions difficult. It was maintained, though, that despite the many ways of valuing cultural heritage,

access to culture and heritage contributes to human well-being. There seems to be a universal quality to the notion of heritage that transcends relativistic interpretation but that is equally bound up in the specifics of time and place.

In looking at culture as an ever-changing process—and at cultural heritage as both a product of that process and as a binding force within it—the group tried to identify some of the factors that influence this dichotomy. Continuity and change, participation, power, and ownership are all bound up in the ways in which cultures are created and progress. It was noted that the construction of heritage is largely derived from the way people remember, organize, and think about material culture, which in the end symbolizes the organization of their relationships and emotions. The stories invested in objects, buildings, and

landscapes constitute an arena in which the *valuing* (appreciating existing value) and *valorizing* (giving added value) of cultural heritage play out.

The bulk of the meeting's discussions focused on the question "How do we shape cultural heritage?" The dialogue often returned to the notion of process—the process of constructing culture, of valuing or valorizing heritage, of negotiating its conservation—and the role of human agency within these processes.

There were long discussions on how our engagements with history and with heritage derive certain benefits that inform these processes. Tangible benefits, such as economic development, were easily discernible. Other benefits—such as cultural confidence and an increase in social peace—were not as easily characterized. To answer the question of why cultural

Agora Meeting Participants: Suad Amiry, Director, RIWAO: Centre for Architectural Conservation, West Bank, Palestine; Lourdes Arizpe, Assistant Director-General for Culture, Unesco, France; Erica Avrami, Project Manager, The Agora, The Getty Conservation Institute, U.S.A.; Daniel Bluestone, Associate Professor and Director, Historic Preservation Program, The School of Architecture, University of Virginia, U.S.A.; Erik Cohen, Professor, Department of Sociology, Hebrew University of Jerusalem, Israel; Miguel Angel Corzo, Director, The Getty Conservation Institute, U.S.A.; Hugues de Varine, Directeur, Asdic: conseils et services pour le développement communautaire, Cour des Entreprises, France; Cevat Erder, Professor, Faculty of Architecture—Mimarlik Fakültesi, Middle East Technical University—Orta Dogu Teknik Üniversitesi, Turkey; Brian Fagan, Professor, Department of Anthropology, University of California, Santa Barbara, U.S.A.; Margarita Gutman, Directora, Programa de Historia y Desarrollo Urbana, Instituto Internacional de Medio Ambiente y Desarrollo—IIED-América Latina, Argentina; Nobuko Inaba, Senior Specialist for Cultural Properties, Architecture Division, Cultural Properties Protection Department, Agency for Cultural Affairs, Government of Japan; Uffe Juul Jensen, Head, Department of Philosophy and Director of Research Center, Institut for Filosofi, Aarhus Universitet, Denmark; Arjo Klamer, Professor in the Economics of Art and Culture, Kunst en Cultuurwetenschappen, Erasmus Universiteit Rotterdam, The Netherlands; David Lowenthal, Professor Emeritus, Department of Geography, University College London, United Kingdom; David Maybury-Lewis, Professor, Department of Anthropology, Harvard University, U.S.A.; Alessandra Melucco Vaccaro, Dirigente Archeologo, Ministero per i Beni Culturali e Ambientali, Italy; Susan Pearce, Dean of Arts, University of Leicester, United Kingdom; Mona Serageldin, Associate Director, Unit for Housing and Urbanization Graduate School of Design, Harvard University, U.S.A.; Karen Stephenson, Professor of Management, The John E. Anderson School of Management, University of California, Los Angeles, U.S.A.; Marta de la Torre, Group Director, The Agora, The Getty Conservation Institute, U.S.A.

A Tribute to Paolo Mora

By Miguel Angel Corzo



heritage is important, the group speculated that, at present, it is largely an act of faith to believe that access to heritage makes people happier and allows people to live life to the fullest. A greater understanding of the role of cultural heritage in society and of its effects on the cultural process is needed. Likewise, the group recognized the need to look at the processes by which culture is constructed and heritage valorized—such as through studies of the psychology of the individual and of how ethnic groups operate.

The group concluded that case studies are critical; in many areas of the field, not enough systematic comparative analyses have been based on case studies. To create and catalogue case studies would allow us to learn more about the strategies of the past. As consistent, successful strategies emerged, those seeking to negotiate among individuals, groups, institutions, and government would have a powerful tool in the global discourse on cultural heritage.

Following the meeting, the participants are continuing their discussions via the Internet. These ongoing exchanges will help determine other areas of research and investigation that will shape this Agora inquiry over the next two years.

THOSE WHO VALUE the artistic and historic legacy of the past lost a great friend when Paolo Mora passed away in March of this year. A world-renowned conservator, a generous teacher, and a man passionate about the work that was his life, Paolo Mora made an enormous contribution to the saving and preservation of a host of the world's cultural treasures. Gifted with great ability and insight, he pursued conservation with a gentlemanly determination that garnered the respect of his colleagues.

Paolo was chief conservator and professor at the Istituto Centrale del Restauro in Rome from 1950 until his retirement in 1986. He and his wife Laura, who was also a professor at the Istituto Centrale del Restauro, were responsible for the conservation of a number of Italy's most notable works of art. The Moras, along with Paul Philippot, wrote *Conservation of Wall Paintings*, a classic work in the profession.

For both Paolo and Laura, passing on the knowledge they'd acquired was an important part of their work. In teaching, Paolo offered a broad vision of conservation—not simply technical approaches to problems. “We try to always form a mentality,” he said, “never to pass on recipes.” Teaching was as much for themselves as it was for their students. As Laura once put it, “It is through teaching that we confirm

everything. . . . Thanks to [our students] we have understood things, and these are always things that come from the heart.”

When he retired from the Istituto Centrale, Paolo did not really retire. Instead, he and Laura took on the leadership of the first field project of the GCI—the conservation of the wall paintings of the tomb of Queen Nefertari in Thebes, near Luxor, Egypt. It was an ambitious undertaking, one that required large portions of patience, conservation expertise, and political skill. Over the course of the project, Paolo could be counted upon to display all three of these qualities. What he displayed most of all was a fervor for the task at hand, a calm but evident enthusiasm for the challenge of rescuing what is arguably the most beautiful of all the pharaonic tombs.

He had first seen the tomb of Nefertari over 20 years earlier. He recalled being awed by the extraordinary quality of the wall paintings—and equally distressed by their deteriorating condition. He said that he “saw immediately that we had to do something.” When the time “to do something” finally arrived, he and Laura headed up an international team of conservators that labored in a cramped, uncomfortable environment to protect a delicate surface over 30 centuries old by applying the high-

est scientific methods while, at the same time, conserving the exquisite aesthetics of the paintings. That they succeeded magnificently was no surprise to those of us who knew Paolo and Laura. But that in no way lessened the admiration we felt for their superb accomplishment.

I feel very fortunate to have worked with Paolo. I learned a great deal from him—not only about conservation but about living and dedication. His love of his work was evident in all that he did.

“When a conservator sees something in bad condition,” said Paolo, “he has to put it in good condition. It is not only for paintings. At home when I see that a glass or a dish is broken, I have to put it together. It is a desire to set things right.”

During his remarkable life, Paolo set a great many things right. We should all be grateful.

Miguel Angel Corzo is the director of the Getty Conservation Institute.



Herant Khanjian

Assistant Scientist, Science

Born in Baghdad to parents of Armenian descent, Herant Khanjian spent his first 14 years in Iraq. He recalls as a child visiting Baghdad museums and the reconstructed ruins of ancient Babylon. He also vividly remembers seeing the great Arch of Ctesiphon, built by the Persians and possibly the widest single-span vault in the world. History—in particular, Islamic history—had an early fascination for him.

In 1987 his parents, desiring a better future for their children, moved the family to Jordan, where they lived for seven months. From there, the family immigrated to the United States, settling in Los Angeles. Herant attended college at California State University, Northridge (CSUN), majoring in chemistry. But science wasn't his only interest. A course he took in European art and its relationship to the history of its time made a positive impression. During his junior year, he had a job in CSUN's chemistry laboratory, but he wanted exposure to a workplace outside of school. After responding to an ad posted in the chemistry department, he was hired in 1988 as a part-time student assistant for the GCI's scientific program.



Denise Tealey

Following graduation, he became a full-time research assistant with the Institute. His initial work focused on liquid chromatography analysis of organic materials. Later he studied infrared spectroscopy and gas chromatography as tools for analysis. He found the gas chromatography research particularly rewarding and is pleased to have coauthored a number of articles on the subject that are having an impact on the field.

In 1996 he was promoted to assistant scientist. Much of his work today again involves infrared spectroscopy that supports the Getty Museum conservation laboratories by analyzing samples of artworks being conserved. He is also a member of GCI project teams studying new techniques for the surface cleaning of art objects and architecture, including gels methods and laser cleaning. Coming from a country with a long history and an ancient culture—and from a family with strong ties to its ethnic heritage—gives Herant a great sense of connection to his work. Being at the GCI has offered him the welcome chance to meet people from a variety of places, providing a cultural education he enjoys.

Helen Mauchi

*Senior Designer,
Information and
Communications*



Denise Tealey

Helen Mauchi was born and raised in Guayaquil, the biggest city in Ecuador. During her childhood, her parents, immigrants from Canton, China, owned and managed the largest Chinese restaurant in the city—a background that gave her a vigorous appreciation of good food. Because her parents believed that learning English was important for their children's future, she and her four siblings attended the American School. There, during her high school years, she specialized and excelled in philosophy and literature.

For college, she came to the United States to study fine arts at UCLA. Among her professors was Art Durinsky, a pioneer in computer graphics design. Graduating in 1983 with a bachelor's degree in graphic design, Helen began working as a designer while continuing her education through UCLA Extension, earning a professional certificate in graphic design and visual communications.

For 10 years, she worked for Continental Communication Agency, a company that specializes in translating and in designing materials for a variety of foreign languages. Her work focused on multilingual communications materials, and over the years she designed numerous technical manuals for a variety of industries and fields, including medicine, education,

computers, and defense. Among her clients were Microsoft Corporation, Litton Corporation, Baxter Paramax, and the American University in Lebanon.

Even before college, she had wanted to work for an art institution. Through a listing in the newspaper, she learned of free-lance design work for GCI Publications, and beginning in 1990, she was a consultant for the Institute. Two years later, she joined the staff as an assistant coordinator for Publications. In 1998 she was promoted to senior designer. Her work includes coordinating, supervising, and often designing a variety of materials—from books, catalogues, and conference materials to slide presentations, promotional items, signage, and exhibition graphics. She also organizes GCI Publications book exhibits at conferences. She takes pride in being part of projects done by the GCI around the world and finds the international aspect of her work especially satisfying. Her own multicultural background has made her an internationalist at heart. Indeed, among her present personal challenges is mastering Jewish cuisine—in particular, refining her technique for making kreplach, the Jewish version of the Chinese wonton.

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