CONSERVATION PERSPECTIVES

THE GCI NEWSLETTER

SPRING 2013

CONSERVING MODERN ARCHITECTURE

The Getty Conservation Institute

A Note from the Director

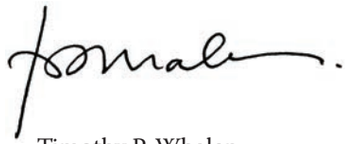
For the past few decades, our colleagues who advocated for the preservation of great twentieth-century architecture have been successful. They have not only saved important buildings—think the De La Warr Pavilion in England or the Century Plaza Hotel in my hometown of Los Angeles—but have also, in the process, raised public consciousness of their significance and helped preserve the ideas of optimism, innovation, and progress that they contain. These colleagues have my admiration and appreciation!

Still, despite these successes and a considerable amount of work on issues facing practitioners, done early on by a number of key organizations, the conservation field has lagged behind in the research necessary for the development of best-practice solutions for the maintenance, repair, and renovation of these structures. Working closely with international partners, our Conserving Modern Architecture Initiative (CMAI) attempts to reinvigorate some of those efforts that began in the 1990s. We seek to bring a strategic focus to these challenges through a program of research, through the development and dissemination of knowledge intended to fill identified gaps in practice, and through training and education efforts. This edition of *Conservation Perspectives* is a small piece of this effort.

The feature article in this edition is authored by Susan Macdonald, who not only is head of GCI Field Projects, but also serves as the project director of the CMAI. In her article she notes the relatively recent emergence of myriad organizations dedicated to saving and conserving modern heritage and delineates the challenges that lie ahead, including achieving widespread recognition and support for the conservation of twentieth-century places, as well as developing a common vision and approach to do so.

It is, in fact, the goal of the CMAI to address some of these challenges—and one of the ways in which the CMAI seeks to do this is through model field projects, the first of which is our Eames House Conservation Project. Kyle Normandin, who directs that project for the GCI, describes in an article of his own how the Institute is working with the Charles and Ray Eames Preservation Foundation to assess the current condition of this iconic work of modern residential architecture, and to assist in the development of a long-term conservation management plan for the house, in the process demonstrating how existing conservation methods can be applied to modern cultural heritage sites.

Moving from the micro to the macro, Danilo Matoso Macedo and Sylvia Ficher in their article examine some of the preservation issues connected to Brasilia, a city planned and constructed under the principles of modernism; the article explores how today, over a half-century since its inception, Brasilia must grapple with preserving its founding character while accommodating the tremendous growth that has followed its establishment. Growth and change are inevitable, and Charles Birnbaum in his article on modern landscapes argues that preservation is more likely to be successful when the public is engaged and when feasible alternatives to destruction are advanced. And in this newsletter's spirited dialogue, Catherine Croft, Hubert-Jan Henket, and Johannes Widodo bring differing perspectives to questions of temporality and materiality in the quest to preserve the built heritage created in the Modern era. I hope you enjoy this edition of the newsletter and find it valuable.



Timothy P. Whalen

Contents

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ON THE COVER
The National Congress building in Brasilia, designed by Oscar Niemeyer and completed in the 1960s. Photo: Gary Yim.

FEATURE ARTICLE

MODERN MATTERS

Breaking the Barriers to Conserving Modern Heritage

BY SUSAN MACDONALD

The time between a building's creation and its protection and conservation has never been as compressed as it is for the heritage of the Modern era. Gropius's Bauhaus was only forty years old when it was listed in 1964. The city of Brasilia, designed in 1956, was inscribed on the World Heritage List in 1987. Attempts to inscribe the Sydney Opera House began a mere eleven years after its completion in 1973. Yet despite early efforts to protect and conserve the most iconic places of the Modern era, it was not until the 1990s that the conservation of modern heritage emerged as a distinct area of practice. That decade witnessed intense activity by a growing group of practitioners to address conservation of twentieth-century heritage, and by the beginning of the twenty-first century, a number of governmental and nongovernmental organizations were focused on this work.[1]

The emergence of local, national, and international organizations dedicated to saving and conserving modern heritage—including Docomomo International, the Modern Heritage Committee of the Association for Preservation Technology (APT), the ICOMOS International Scientific Committee on Twentieth-Century Heritage, modern Asian Architecture Network (mAAN), and various art deco groups—advanced conservation efforts. The large number of such groups demonstrates an interest in and comfort with identifying the recent past as important and brings together sectors of the architectural and conservation community that had not previously been closely aligned.

Docomomo, formed in 1988, has been hugely influential, creating a network of academics and practitioners that catalyzed action within and across more than sixty member countries. Founded on a different premise from that of other conservation groups, Docomomo promotes the continuum of the modernist

The Sydney Opera House in Sydney harbor, completed in 1973. The conservation management framework for the structure includes the Utzon Design Principles—authored by the building's architect, Jørn Utzon, to guide future changes to the building—as well as a conservation management plan. Photo: © Sheridan Burke.

philosophy in the practice of contemporary architecture and simultaneously aims to conserve the legacy of modernism by bringing contemporary architects and critics who are proponents of modernism together with historians and conservationists.[2]

In the 1990s professional organizations such as APT and government heritage agencies in Europe and North America, including the U.S. National Park Service and English Heritage, organized conferences and workshops and issued publications on technical issues; these efforts contributed to international practice. The ICOMOS International Scientific Committee on Twentieth-Century Heritage began activity in the early 2000s, launching Heritage Alerts, a program advocating for threatened and significant twentieth-century places, and in 2011 adopting the *Madrid Document: Approaches for the Conservation of Twentieth-Century Architectural Heritage*.[3] Other organizations have also been working in a variety of ways to advance this area of conservation.

Considering twenty-five years of practice and all that has been achieved, it would be easy to surmise that modern heritage is well loved, cared for, and conserved. However, many important twentieth-century places remain unprotected. There is still little research addressing common technical problems impeding the repair of these buildings. With the termination of the Conservation of Modern Architecture course—a partnership of various Finnish institutions and ICCROM—there is no dedicated training on the subject at an international level, and there are only isolated opportunities at national levels.

This is the area of conservation where future and past collide, where creator and conservator may come together, and where we have better access than ever before to firsthand knowledge of why and how places were created. But despite considerable professional interest and an admirable body of conservation knowledge, there remain many challenges. Clearly we have not yet achieved widespread recognition and support for the conservation of twentieth-century places, nor have we arrived at a shared vision, approach, or methodology for doing so. It is therefore timely to reflect on how the practice of conserving modern architecture has advanced, in order to identify the areas on which future efforts should be concentrated. This need prompted the Getty Conservation Institute (GCI) to launch the Conserving Modern Architecture Initiative in 2012. In considering how the GCI could contribute, preliminary research identified the most commonly cited and interrelated challenges as:

- lack of recognition and protection;
- lack of a shared methodological approach;
- life span and technical challenges (durability, knowledge, and experience of material conservation, and repair versus replacement);
- obsolescence (functionality, adaptability, and sustainability).

The limited passage of time in which to assess the Modern Movement within the palimpsest of history impacts how conservation is approached and gives rise to the first two challenges.

PROTECTING THE NOT YET LOVED

Many national and local authorities now include twentieth-century heritage in their listing programs. Nevertheless, in parts of the world, there remains nervousness about protecting anything but the icons of the Modern era. "There is so much of it," "We don't like it," and "It's too hard to deal with" are common criticisms. In many areas, twentieth-century structures dominate the urban landscape, and for older generations their realization is a living, but not necessarily positive, memory. These places are yet to go through the Darwinian natural selection process, after which the survivors are appreciated as heritage. Thus, questions are raised about what to protect and how to establish comparative levels of significance within existing frameworks used in the heritage identification and assessment process.[4]

Conservation approaches have evolved since the first modern buildings were awarded heritage protection in the late 1970s. Recognition of a broad range of heritage values and types of heritage places, changes in heritage management, reduced government support, and the importance of public participation have all influenced what is protected and how it is conserved. In many places, attention has shifted from expert assessments of

Trellick Tower, designed by Ernö Goldfinger and completed in 1972. It was listed at Grade II* ("particularly important buildings") in 1998 in English Heritage's postwar listing program. The program included a public engagement process, which helped shift English public opinion about the architecture of the postwar period. Photo: Steve Cadman, courtesy Wikimedia, licensed under Creative Commons Attribution–Share Alike 2.0.

Maison La Roche and Maison Jeanneret in Paris, designed by Le Corbusier and now part of the Fondation Le Corbusier. With the help of friends, Le Corbusier established the Fondation Le Corbusier in 1960 to protect his legacy through promotion and celebration of his work. The organization facilitates scholarship via its archival collection, undertakes exhibitions, and is engaged in the conservation of Le Corbusier's work, including the buildings in their care. Photos: Olivier Martin-Gambier, © FLC 2013.

iconic architectural buildings—a focus seen as elitist by some—to community-based heritage assessments that capture places expressing wide-ranging values, places appreciated across large sectors of the community. While modernism was seen as an important tool in social reform, the listing of modern heritage has been driven primarily by the architectural community, and it focused initially on architectural value. Lack of public support has sometimes hampered efforts by authorities to list modern heritage successfully. When listing efforts were designed strategically—with education and awareness-raising components that enhanced understanding of these places and that provided conservation information to owners—controversy was reduced, and listing was more successful.[5] Stronger support was also generated when community engagement occurred early in the process.

As time passes, appreciation will inevitably grow for places that represent the Modern era's richness and diversity. Survivors will become more precious, and a level of comfort about conserving them will be achieved. In the meantime, important places will be lost unless we stimulate greater public support, assess significance in the context of a large number of survivors, and help people learn how to conserve this legacy.

A SHARED APPROACH TO CONSERVATION

Cutting across these challenges is the much-debated question of whether conserving modern heritage should follow existing approaches or instead demands a new paradigm. Conservation is seen by some practitioners as a moral enterprise, guided by well-established tenets embodied in its charters, guidelines, and legislation, and embraced by close-knit groups of professionals. Despite its earlier origins as a defined area of professional practice with shared international concepts, conservation is a largely twentieth-century movement. Modernism has a similar trajectory, although it has a larger group of international disciples. As with conservation practice, modernism and its followers strove for universal truths, reinforced through international manifestos and key texts. Both movements share ideas of contributing to a more civil society—one through retention of a connection with the past, the other through creation of a better future environment. The early period of modern heritage conservation saw these universal truths collide, and questions arose about whether the fundamental tenets of modernism conflicted with conservation practice. Traditional conservation practitioners argued for the application of existing philosophical approaches, tempered by the particular requirements of the conservation challenges at hand, while others argued for a new philosophical approach specific to the demands of modern heritage. The question that generated the greatest debate was whether accepted conservation norms could be applied to places representing the modern age, specifically with respect to material conservation. Could authentic fabric be conserved without compromising design intent, which had been driven by new social ideals?

After initial contention, some consensus was achieved—largely amounting to recognition that existing philosophical approaches, as expressed in conservation charters, were indeed broadly applicable to the conservation of the recent past; still, there were some specific technical challenges that necessitated judicious, case-by-case consideration. Lateral thinking, creativity, and flexibility in application of the existing tenets enabled practitioners to accommodate the materiality of the Modern era—specifically and most problematically, issues arising from innovative construction methods and use of materials. The aim for some working in this area was to incorporate modern conservation into the mainstream, reduce controversy, identify a common methodology, and embed it within the continuum of conserva-

tion culture. It was recognized that some issues had already been tackled in the conservation of industrial heritage sites, cultural landscapes, and sites with predominantly social significance.

Even so, the debate regularly reappears, recently prompting the creation of the aforementioned Madrid Document. Modern architecture has attracted a new generation of practitioners to its conservation. The influence of modernism is strong in contemporary architectural practice, and architects practicing in this style are also engaged in the conservation of modern heritage. The swelling of the ranks of those practicing in this area—with architects who are less familiar with conservation theory, methodology, and practice but who bring a deep understanding of modernist theory—continually fuels the debate and the calls for specific doctrinal texts to guide modern heritage conservation. Those familiar with conservation practice have argued that existing conservation principles are fine, and that it is counterproductive to identify modern heritage as different. The injection of new blood into the small and sometimes insular conservation fraternity has served to catalyze reevaluation of some existing manifestos and tools, highlighting areas of confusion or areas where conservation has not been interwoven into general planning, development, and architectural practice. The joining of these sectors provides opportunities to integrate conservation into architectural practice more broadly and reinforces the idea that conservation is a creative process in which design skills are as important as technical knowledge.

The architects of the twentieth century whose work we are now conserving have also played an important role in the process—first by advocating for the protection of their own buildings; second by a series of high-profile bequeathals of their houses; and third by providing access to the living memory of the design, construction, and materials of their buildings. The architects' actions have sometimes meant that conservation has privileged architectural or design significance. Some architects faced with the conservation of their buildings seek to improve them; some want to evolve them, introducing new architectural ideas that they have developed over time. While it is important to engage with the creators when possible, it is also important to place their advice in a context for making conservation decisions and to recognize the different perspectives of creator and conservator.

It would be helpful to move toward a shared view on approaching conservation, if only so that efforts can be directed toward solving specific conservation problems. Much has been written about the ideological confrontations, and the two areas that receive most attention are material significance and adaptive reuse.

MATERIAL AUTHENTICITY AND LIFE SPAN

The technical challenges posed by conserving twentieth-century places undoubtedly raise the most difficult philosophical conflicts. The move from craft to industrialized construction introduced many new materials, new uses for traditional materials, and component-based systems. Traditional detailing was abandoned, and it was often claimed that buildings were maintenance free. In the fiscally austere postwar era, limited budgets and shortages of materials such as steel and timber, together with the de-skilling of the building industry, meant that building quality was sometimes compromised. These factors have resulted in a building stock with a reduced life cycle. Shorter cycles of repair and higher rates of obsolescence lead to higher costs in the long term.

Costs of repair versus replacement will always be an argument used against conservation. But this argument may lose steam as sustainability audits are employed in assessing the environmental impact of new development, as compared to the adaptation of existing structures. However, while energy audits often prove the environmental value of retaining traditional buildings, this may not be the case for buildings designed from midcentury onwards—designed during a time of seemingly inexhaustible, cheap energy and constructed of materials that require high energy to produce.

Howden Minster in Yorkshire. Conservation practitioners face difficulties working with materials of poor durability or that are no longer available, with structures from all eras—not just modern buildings. For example, the use of magnesian limestone by medieval craftsmen at Howden creates difficulties for current repair. Photo: Eric Doehne, GCI.

Over the last twenty years, there have been limited advances in developing and adapting repair methods to conservation needs. It has become evident that in some cases repair is not possible, and large-scale replacement or even reconstruction may be necessary. In these instances, balancing the level of significance of the place and the cost to repair it is difficult, and the situation demands creative solutions. There is no infrastructure for modern repair—as there is for traditional conservation—partly because of the vast array of materials and systems used, and partly because the knowledge is still in its infancy. Early efforts challenging industry to identify new conservation repair methods and products have weakened, and leadership is needed to progress. It is also important to learn from the ways in which similar issues were addressed in the past. There are many examples of materials (such as certain stones, timbers, and metals used in traditional buildings) that today are unavailable, hazardous, or known to perform so poorly that replacing like for like is not an option.

Research is needed to develop technical solutions for the most common and enduring problems, such as the repair of exposed concrete, cladding systems, and plastics. We need information—on the ways modern materials deteriorate and on suitable repair methods—that builds on the literature from the 1990s. Guidance on diagnosing problems and systematically working through the repair options, as practiced in traditional conservation, and communicating this methodology to new audiences would also advance the field, as would case studies illustrating how others have arrived at balanced philosophical decisions.

Materiality issues have been heavily discussed. Ultimately, conservation is case specific, and different practitioners will make different decisions. Current limitations on technical knowledge and available repair methods mean that the ability to be faithful to conservation principles may be challenged at times. When significance is at the core of decision making, balancing design and material matters becomes a rational process, although one that is still subject to individual interpretations. Transferring knowledge on the values-based conservation approach to a wider audience would assist in developing a shared methodology.

ADAPTATION AND SUSTAINABILITY

Buildings distinguish themselves from artworks when it comes to conservation simply because for the most part, in order to survive, they have to be used. This is true of most buildings, including heritage buildings. Only those functioning as "monuments" or as building museums are not continuously adapted in order to sustain them, although they, too, may require adaptation to fulfill their role as public venues. These sites, however, constitute only a small portion of protected heritage places. Conservation, in most cases, is about managing change in ways that retain significance.

The explosion of building types over the twentieth century to provide for new ways of living and working, and the centrality

of functionalism within the modernist ideology are constantly cited as the other major challenges for conserving modern architecture. These challenges can be grouped as:

- adapting functionally obsolete buildings to new spatial and planning requirements, particularly if the use contributes to social significance (form follows function);
- retaining significant design features relating to the building's use that are obsolete or materially problematic;
- upgrading buildings for modern environmental performance (environmental sustainability);
- managing scale (identifying compatible uses for very large buildings);
- economic sustainability and the viability of repairing large buildings (cost of repair and adaptation).

These issues, identified nearly twenty years ago, are still cited as problems specific to twentieth-century heritage. However, it is debatable whether functionality and therefore adaptability are any more problematic for modern buildings than for those of other eras.

Adaptation for new uses or new functional requirements can pose difficulties, but it is important not to single out modern buildings as the only ones facing these issues, for to do so would likely reduce support for their protection and conservation. A heightened concern for design integrity can hinder adaptive reuse and pose dangers to mainstreaming modern conservation. We need a focus on good solutions by publicizing, in conferences and publications, examples of successful twentieth-century adaptive reuse projects and by demonstrating the ways in which difficult issues have been managed.

The scale of some modern complexes poses challenges for adaptive reuse. Conservation projects at these sites also can be challenging, but perhaps no more so than for comparable sites from earlier eras, such as the mid-nineteenth-century textile mill at the Saltaire model village in West Yorkshire (upper left). Shaft 12 at Zollverein Coal Mine Industrial Complex in Germany (bottom) and the Van Nelle Factory in the Netherlands (top) have been adapted to new uses and provide successful case studies for managing similar issues at twentieth-century sites. Photos: Paul Stevenson, courtesy Wikimedia, licensed under Creative Commons Attribution-Share Alike 2.0 (Saltaire); Avda, courtesy Wikimedia, licensed under Creative Commons Attribution-Share Alike 3.0 Unported (Zollverein); Kyle Normandin, GCI (Van Nelle).

ADVANCING PRACTICE

The continuing debate on these issues—as well as the realization that early modern buildings are soon due for their second round of repair, and their postwar siblings are facing their first[6]—was the catalyst for the GCI's Conserving Modern Architecture Initiative. The initiative aims to advance practice in this area of conservation through a comprehensive research and implementation program, which includes materials-based research that investigates innovative techniques to arrest decay in these buildings while sustaining them into the future. Model field projects will be developed to demonstrate improved approaches and methods (the first of these, conservation of the iconic Eames House in Los Angeles, is described in this newsletter). Other activities include developing education and training programs and didactic materials for practitioners, creating new literature, and disseminating resources. The GCI initiative—which will include a number of partners—will augment existing activities and address practical conservation challenges, for which strategic approaches and concerted efforts can enhance thinking.

Over the first twelve months of the program, discussions with practitioners from around the world have assisted in focusing the work. This research phase culminated in a colloquium in March 2012 that gathered key players engaged in the conservation of modern heritage, to assess current practice in order to pinpoint immediate needs, determine how to advance this area of practice, identify priorities and organizations able to address them, and formulate an action plan. The outcomes of this colloquium will be shared on the GCI website in fall 2013. The GCI believes that through a strategic program undertaken with others, some of the barriers impeding the conservation of modern heritage can be removed. Embedding modern heritage into the continuum of conservation practice is the first important step.

Susan Macdonald is head of Field Projects at the Getty Conservation Institute.

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1. An overview of the history of conserving modern architecture is provided in Chapter 1 of Theodore H. M. Prudon's *Preservation of Modern Architecture* (Hoboken, NJ: John Wiley and Sons, 2008).
2. The aims of Docomomo are captured in the Eindhoven Statement, released at the inaugural conference in 1990. Docomomo International, *First International Docomomo Conference, 12–15 September 1990, Eindhoven, the Netherlands* (Eindhoven: Docomomo, 1991). Also online at: www.docomomo.com/com/eindhoven_statement.htm.
3. ICOMOS International Scientific Committee on Twentieth-Century Heritage, *Madrid Document: Approaches for the Conservation of Twentieth-Century Architectural Heritage*, 2011. http://icomos-isc20c.org/id13.html.
4. Susan Macdonald and Gail Ostergren, "Developing an Historic Thematic Framework to Assess the Significance of Twentieth-Century Cultural Heritage: An Initiative of the ICOMOS International Scientific Committee on Twentieth-Century Heritage," Getty Conservation Institute, Los Angeles, 2011. www.getty.edu/conservation/our_projects/field_projects/cmai/develop_historic.pdf.
5. English Heritage's postwar thematic listing program, undertaken in the mid-1990s, included a public awareness raising campaign that successfully shifted opinion on the value of buildings from this period—from a negative view toward recognition of their importance and support for their protection.
6. Michael Stratton, ed., *Structure and Style: Conserving Twentieth Century Buildings* (London: E. and F. N. Spon, 1997), 195–206.

THE EAMES HOUSE

Conserving a California Icon

BY KYLE NORMANDIN

AT THE BASE OF A COASTAL HILL IN LOS ANGELES, alongside a large meadow and among eucalyptus trees, sits the Eames House, a masterpiece of midcentury modernism. The 1949 home is part of a group of five houses on a five-acre parcel—formerly part of the Will Rogers estate—located on a bluff with expansive views of the Pacific Ocean. It was designed under the influential Case Study House Program, initiated by John Entenza, editor of *Arts and Architecture* magazine.

Built by prolific American designers Charles and Ray Eames, the house was an experiment in the use of prefabricated materials and mass-produced, off-the-shelf products to rapidly construct a residential structure. The use of industrial materials for home building was unique at the time. The shape and height of the house and studio, as well as the personalized use of interior space, are equally exceptional. Charles and Ray Eames inhabited the house and studio until their deaths in 1978 and 1988, respectively. The paired structures ensemble, as well as their contents and collections, tell us much about the design and architecture of this era and about the role the Eameses played as innovators of modernism.

In September 2011, the contents of the Eames House living room were temporarily relocated to the Los Angeles County Museum of Art for exhibit in *California Design, 1930–1965: "Living in a Modern Way,"* which was part of Pacific Standard Time: Art in L.A. 1945–1980. The loan to the exhibition provided the impetus to address physical conditions at the house that had not been examined in detail since its construction. In March 2012 the Getty Conservation Institute partnered with the Charles and Ray Eames Preservation Foundation Inc. (Eames Foundation) to develop a conservation management plan for the long-term care and maintenance of the site. This effort became the first field project under the GCI's Conserving Modern Architecture Initiative. Undertaken with the support of the GCI Council and the Dunard Fund USA, the project addresses a number of interrelated conservation issues that focus on the building envelope and the development of an appropriate environment for the interior fabric of the house, which includes its contents and collection—all part of the design legacy of Charles and Ray Eames. The project team is providing conservation advice, investigating the interior and exterior environmental climates of the house, and performing scientific analysis of the material fabric, with assistance from Getty Museum conservators.

GCI senior project specialist Kyle Normandin using instrumentation to take light and ultraviolet light readings in the living room of Eames House. Photo: Scott S. Warren, for the GCI.

CONSERVING THE EAMES HOUSE

At the beginning of the project, a multidisciplinary team of conservators, scientists, architects, and engineers faced a set of challenges. First, a number of physical conditions in the main house and living room were identified by the GCI, together with the Eames Foundation, as requiring investigation in order to determine possible conservation treatments.

In the living room, the square vinyl tiles had lost adhesion to the concrete floor and had become loose after sixty years in place. These floor tiles had also become brittle, having reached the end of their life span. In addition, examination of the tile composition confirmed that the tile and adhesive materials were laden with asbestos and required careful removal and abatement. Once the tiles were removed, the source of underlying moisture intrusion was confirmed to be seepage through the concrete floor. To prevent future intrusion, the GCI worked with the Eames Foundation's consulting architects, Escher GuneWardena Architecture, to evaluate liquid moisture barrier systems and select one for application beneath the new vinyl composite tile flooring. It was aesthetically critical for the new living room floor tiles to match the originals in appearance. The moisture barrier system also had to be compat-

A view of the Eames House's south–facing glass window wall and terrace. Photo: Scott S. Warren, for the GCI.

ible with the new flooring, to ensure a healthy interior environment and long-term performance of the new flooring system.

Another area of GCI investigation was the use of color and paint at the Eames House. In July 2012, GCI staff were able to document more fully the use of color at the house. Ray Eames was an artist and colorist, and her influence on the selection of paint colors and patterns at the house was evidenced in the investigation of the paint stratigraphy. By careful examination of paint samples removed from the interior and exterior metalwork, researchers recorded the series of painting campaigns over the life of the house, confirming how the color changed over time, as substantiated by the Eames Foundation.

The GCI carried out on-site paint excavations at selected areas of the metalwork and steel window frames. Using stainless steel scalpels and on-site microscopy, conservators made small exposure windows on painted surfaces, peeling back each paint layer to reveal the layers underneath. Through this examination, the GCI discovered a first-generation paint layer of a light, opaque warm gray. The paint was distinctively mixed and possibly tinted by hand with mineral pigments such as red iron oxide, Prussian blue, and chrome yellow—a finding that tends to confirm the original warm gray color of the metalwork described in early accounts of the house. Understanding this paint stratigraphy, combined with documentary evidence, will assist in making choices about repainting the metalwork, both now and in the future.

Whereas a tremendous amount of information exists about most of the materials used to construct and fabricate the Eames House, little information existed about the wood paneling wall in the living room. The long narrow panel boards in the room are configured vertically from floor to ceiling and form a continuous walled surface of warm golden wood that spans the interior rear wall of the living room and continues on the other side of the glass wall to the south-facing exterior terrace area. The large glass expanses allowed long-term exposure to daylight, including ultraviolet light, that has caused some degradation of the living room wood finishes (and some distress to the living room contents as well). Getty Museum conservators identified the wood species by removing small samples, cutting them into small thin-section specimens, and examining the cellular structure microscopically. This examination, which included studying the size and arrangement of the wood vessel pits, confirmed that the wood is a species of eucalyptus (*Eucalyptus microcorys*) commonly known as Australian tallowwood. Interestingly, similar eucalyptus trees stand outside the Eames house and populate the neighboring hillside.

Conservators recommended a treatment for the paneling that would preserve the original tallowwood and varnish treatments, including the patina. Treatment began with a gentle overall

GCI project specialist Emily MacDonald-Korth carrying out on-site paint excavations on exterior metalwork at the Eames House. Right: A detailed view of the paint excavation being done with a stainless steel scalpel. Photos: Scott S. Warren, for the GCI.

cleaning of the wall with a mild aqueous solution to remove soil from the pores of the wood. Then several re-saturating varnishes were evaluated for color and appearance, with minimal aesthetic impact to the original wood substrate being an important consideration. The treatment chosen involved a light re-saturating varnish that maintained the warm glow of the tallowwood paneling.

A MANAGEMENT PLAN

One of the goals of the Eames House Conservation Project is demonstrating how a maintenance-based approach to conservation can prolong the life span of building materials and prevent unnecessary replacement. Current and past investigations and continued environmental monitoring of the interior and exterior climates will lead to greater understanding of the original building material fabric and of the care needed to enhance its durability—information that will guide decisions by the Eames Foundation about the maintenance of the house. Development of a conservation management plan that brings together historical documentary evidence, physical analysis of the existing fabric, and knowledge of its performance will inform a long-term strategy for the care and conservation of the house. At the same time, this project will provide a model for the preservation of similar buildings from this era by demonstrating ways that thoughtful conservation can be applied to modern buildings.

Kyle Normandin is a senior project specialist with GCI Field Projects and project manager of the Institute's Eames House Conservation Project.

BRASILIA

Preservation of a Modernist City

BY DANILO MATOSO MACEDO AND SYLVIA FICHER

IN 1956, BRAZILIAN PRESIDENT JUSCELINO KUBITSCHEK committed his government to the erection of a new federal capital in the country's remote interior, to be inaugurated before the end of his term of office. This constituted a major step toward achieving a two-centuries-old dream of spreading the country's population into the hinterland of Brazil. Through a national competition held the following year, an international jury selected the entry by Lucio Costa (1902–1998) for the urban design of the new city—the so-called Pilot Plan (*Plano Piloto*) of Brasilia.

A crucial feature of Costa's proposal was a sharp distinction between an administrative *civitas* of monumental character and the everyday *urbs*.[1] On a monumental axis running east to west and lined by a sequence of public buildings, the Esplanade of Ministries abuts the capital's foremost civic space, the Three Power Plaza. Brasilia's residential quarters—which were meant for five hundred thousand inhabitants and included commerce, services, and educational and health facilities—were conceived in terms of neighborhood units and modulated in superblocks along an arched north-south freeway.

This division of the urban fabric between the civic space and the residential areas was highly deliberate. It was intended to make possible the speedy completion of the most prominent civic structures to create an emblematic vision of the nation's new capital. The strategy was effective. For the *civitas*, world-renowned architect Oscar Niemeyer (1907–2012) and his team designed the executive, legislative, and judiciary palaces, Brasilia's celebrated icons. The most essential bureaucracy was accommodated without delay, and the population of the Federal District quickly jumped to about one hundred fifty thousand inhabitants after the inauguration in April 1960.

BRASILIA TODAY

Half a century later, Brasilia is the fourth-largest metropolis in the country and the home of more than two and a half million citizens. Yet fewer than 10 percent are residents of the Pilot Plan area. While the original nucleus accommodates chiefly the upper middle classes, by far the greater portion of the population, covering a wider social range, lives in the twenty-seven satellite towns that now exist in the Federal District. Most of these are merged into one extensive multi-centered conurbation sprawling from the Pilot Plan toward the southwest, connected by a few expressways. With the exception of some neighborhoods teeming with high-rise apartment buildings, dispersion, low densities, and extensive empty lands are the rule. An insufficient mass transportation system, segregation, and neglected public spaces—problems not unusual in metro-

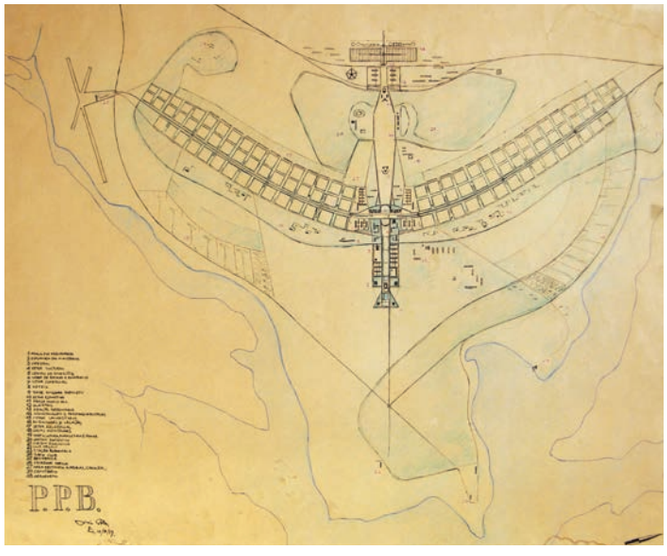
The Esplanade of Ministries in Brasilia. The National Congress complex, designed by Oscar Niemeyer, can be seen in the distance in the center. Photo: Vesna Petrovic.

politan areas—are much amplified in Brasilia by misguided urban policies.

Some of these shortcomings, such as road specialization and monofunctional zoning, were part and parcel of the Modern Movement ideals, which shaped the urban planning agenda of the 1950s. As a consequence, they are inherent traits of the Pilot Plan and its offspring, the satellite towns, and today they are in urgent need of revision.

LEGAL MEASURES

Brasilia was built at a moment when the modernist agenda was under scrutiny; its principles were severely attacked by critics such as Bruno Zevi and Sibyl Moholy-Nagy even before its inauguration.[2] On the other hand, Brasilia's completion in three and a half years was praised as an epic feat of self-determination by the Brazilian people, as reported by architectural historian Norma Evenson.[3] Brasilia became a monument to its own building, and Oscar Niemeyer's palaces turned into new symbols of the nation.



Top: Lucio Costa's winning entry for Brasilia's Pilot Plan competition. Source: Casa de Lucio Costa. Bottom: An aerial view of the south wing of Brasilia's Pilot Plan in 2010. Photo: Joana França.

Albeit more conceptually, Lucio Costa never ceased to defend his work. In 1961, in answer to criticisms about the Pilot Plan's lack of human scale, Costa argued that its qualities should be gauged while considering three different configurations: a *monumental* scale, a *gregarious* scale, and a *residential* scale. Thirteen years later, he added a fourth category: a *bucolic* scale.

In the early 1980s, an inter-institutional group of architects—from local government, the national monuments agency, and the university—made some efforts to assure systematic procedures for protection not only of the Pilot Plan but also of other areas of historical interest in the Federal District. However, it was Costa's report *Brasilia Revisited*, reinforcing the four scales as a leitmotif for preservation, that defined the parameters for the listing of the city as established in a short local statute in 1987. Although the four scales were initially intended to demonstrate that Brasilia was just a town like any other, they were paradoxically characterized as defining its uniqueness. Somehow it came to be presumed that the way the scales mix with one another determines the character to be maintained in different sectors.

This local statute was, in fact, meant to address UNESCO's legal requirements for the candidacy of Brasilia as a World Heritage Site, a title that was awarded in December 1987, thus making the Pilot Plan one of the first modernist sites on that list. As the ensemble was still incomplete, the International Council of Monuments and Sites recommended that additional legislation should be passed to "ensure the preservation of the urban creation of Costa and Niemeyer."[4] Hence, a federal statute was issued in 1992 that enforces the same parameters as the local statute, founded not on a realistic appraisal of the actual city, but on its original design and Costa's four-scales justification. Leading to dire consequences, the federal statute consented to proposals for new buildings by the architects of Brasilia, Costa and Niemeyer, as necessary complements to the original Pilot Plan.[5]

Although the federal government obviously has a prominent presence in Brasilia, there is a lack of consistent guidelines for the maintenance of federal buildings and for expansion of the city. Moreover, urban policies and management are left entirely to the Federal District administration, which functions as an independent state with local political interests.

PRESERVATION NOW

With respect to preservation in Brasilia, few buildings are listed individually, and regulatory protection remains vague, without detailed guidelines for current conservation. Combined with the problems that stem from administrative disarray, a pervading admiration for the work of Costa and Niemeyer and a reverence for their original designs constantly impede commonsense solutions to the city's problems. In the name of heritage, grave

The national museum in Brasilia, also designed by Oscar Niemeyer, which opened in 2006. Niemeyer continued to design buildings for Brasilia during the half century following the city's establishment. Photo: Claude Meisch, courtesy Wikimedia, licensed under the Creative Commons Attribution–Share Alike 3.0 Unported license.

mistakes in planning—such as high-speed freeways that criss-cross the urban fabric dangerously—are defended by preservationists, while massive low-quality housing projects are built at great distances from the city center, for the sake of maintaining an unsullied image of the Pilot Plan.

Niemeyer took full advantage of the provision that allowed him to design freely the "necessary complements" to the original Pilot Plan. As a result, the last twenty-five years were witness to a series of his interventions, each clearly undertaken as a new enterprise without reference to the existing context. One extreme instance was the 2009 proposal (never built) that included a 100 meter obelisk in the middle of the Esplanade of Ministries, which fortunately received a negative public response.[6]

With such a dearth of viable directives, real estate interests and gentrification, along with the genuine awareness in the population of its importance, have somehow successfully preserved the Pilot Plan's unique traits, especially its green spaces.

The Pilot Plan's representative ensemble and the functional mix in the residential neighborhood units are innovative and successful experiments. Nevertheless, much of their small-scale detailing remains to be implemented, or at least improved; walkways, parking lots, street furniture, and other elements essential to urban life should be carefully designed. Public debate and new proposals, preferably generated by competitions, are also needed to address the monofunctional areas in the center of the city, to rehabilitate areas such as the consolidated Commercial Sector and complete other areas, such as the vacant Hotels Sector.

As the main presence in the country's capital, the federal administration should keep control of its assets and suitably plan for the physical growth of its institutions. A specific agency to deal with these issues should be established. A consistent conservation management plan, with policy guidance that could facilitate and manage change in the future, is imperative and could be a highly useful tool to promote decision making, overcoming personalistic, ad hoc solutions. As with other World Heritage Sites, such a plan would become an official document that guides governmental agencies and local governing bodies. It would define context and balance cultural and social significance with appropriate policies, providing a road map for the preservation of the capital complex and setting. It would help establish a proper relationship between the Pilot Plan area and its surrounding metropolitan areas, recognizing that they are dependent on each other and should be planned as a single entity.

Brasilia is a showcase of the challenges faced when dealing with the modern city. It is hindered by imprecise definitions of cultural heritage values and an obsession with its founding fathers, instead of taking into account today's material and social realities. Above and beyond its illustrious core, it is a dynamic and pulsating city. Its true qualities are still to be thoroughly assessed, as much as its many failures, old and new, must be faced and overcome. In other words, Brasilia is not just a *civitas*; preservationist consciousness must also embrace its greater context, including its *urbs*.

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1. In 1957, Lucio Costa expressed this concept of the town: "It should not be envisaged merely as an organism capable of performing adequately and effortlessly the vital functions of any modern city, not merely as an *urbs*, but as a *civitas*, possessing the attributes inherent to a capital." In Lucio Costa, *Report of the Pilot Plan for Brasília* (Brasilia: GDF, 1991), 77.
2. Bruno Zevi, "Inchiesta su Brasilia: Sei? Sulla nuova capitale sudamericana," *L'Architettura: Cronache e Storia*, n. 51, (Jan. 1960): 608–19; and Sibyl Moholy-Nagy, "Brasilia: Majestic Concept or Autocratic Monument?" *Progressive Architecture* 40, no. 10 (Oct. 1959): 88–89.
3. Norma Evenson, Two Brazilian Capitals (New Haven: Yale University Press, 1973).
4. ICOMOS, *World Heritage List*, No. 445: *Advisory Body Evaluation* (Paris: UNESCO World Heritage Center, 1986). http://whc.unesco.org/en/list/445/documents/.
5. IPHAN, Portaria no. 314/1992. www.iphan.gov.br.
6. The entire proposal was named Sovereignty Plaza and included a Memorial to the Presidents and a Monument to Sovereignty. For a full account of the episode, see Danilo Matoso Macedo, "Praça da Soberania: Crônica de uma polêmica," 2009. http://mdc.arq.br/2009/10/24/praca-da-soberania-cronica-de-uma-polemica/.

MANAGING CHANGE AND MODERN LANDSCAPES

BY CHARLES A. BIRNBAUM

CONSIDER THE NUMEROUS PUBLICATIONS ROMANTICALLY CHRONICLING LOST ARCHITECTURAL GEMS, including *Lost New York* by Nathan Silver (1968), *Capital Losses: A Cultural History of Washington's Destroyed Buildings* by James Goode (1979), *Lost Boston* by Jane Holtz Kay (1980), and *Lost Chicago* by David Garrard Lowe (1975). These richly illustrated publications have become both a call to action and a mandate for responsible stewardship of our great urban architectural legacy. There are also "then and now" pictorial guides that use photographic pairings to chronicle the changed urban landscapes of Washington DC, Chicago, Boston, Baltimore, Philadelphia, and scores of other cities. "Then and now" pairings are certainly intriguing and prompt nostalgic longings for the past, but they offer little critical analysis about why urban fabric changes.

Cities are constantly undergoing change, either aided or hindered by myriad emotionally and politically charged planning processes. Can what is lost and what is destined to change capture the public's interest? How can historians and preservationists engage the public in a more effective way? When managing change, who gets to decide what is retained or changed? And how is success measured?

In many cases, public engagement is critical. In the new urban regeneration scheme of New York's High Line—a masterful combination of design and historic preservation—public engagement helped the design competition generate 720 entries from thirty-six countries. The World Trade Center Site memorial competition yielded 13,683 registrants and 5,201 memorial submissions from sixty-three nations. Broad public engagement such as this is apt to bring forward unexpected and entrepreneurial designs that intelligently address the challenges faced.

With public engagement in mind, let us consider recent threats to three modern works of architecture and landscape architecture. In each case, a rehabilitation solution has been put forward, advanced by a coalition of advocates from the design and historic preservation communities.

New York's High Line public park, built on an elevated historic freight rail line on the city's West Side. Public engagement helped secure this masterful combination of design and historic preservation. Photo: Håkan Svensson, courtesy Wikimedia, licensed under the Creative Commons Attribution–Share Alike 3.0 Unported license.

First is Chicago's Prentice Women's Hospital (Bertrand Goldberg, architect, 1975), owned by Northwestern University. In an entrepreneurial bid to stop demolition, the Chicago Architecture Foundation (CAF) promoted a public discussion about the fate of the hospital and other modern icons, titled "Re-use It or Lose It," as part of its Chicago Debates series. In addition, CAF, in collaboration with two other organizations, held a Future Prentice design competition, which challenged designers to restore, modify, or expand Prentice Women's Hospital. Separately, *New York Times* architecture critic Michael Kimmelman, advocating for a design by Chicago-based architect Jeanne Gang, declared that "Northwestern needs to avoid the ignominy of having torn down a landmark. And sometimes a third way is the best way."

Second, consider Peavey Plaza in Minneapolis, a modern, two-acre public space adjacent to Orchestra Hall. Completed in 1975, Peavey Plaza is the most important extant work designed by M. Paul Friedberg. It is the nation's first "park plaza," a landscape typology that Friedberg created, and which he describes as "a mixture of the American green space and the European hard space." In January of this year it was listed in the National Register of Historic Places. Municipal officials and representatives from Orchestra Hall, currently undergoing a major renovation, have decided that the poorly maintained Peavey no longer works for them. They argue that complete restoration is onerously expensive and that there are no reasonable alternatives to demolition and replacement.

To stimulate public discourse and involvement, Friedberg, at his own expense, came up with a richly illustrated alternative concept that addressed the city's site-specific design and safety challenges. The preservation community, Peavey Plaza supporters, and the original landscape architect are not proposing restoration; rather they advocate an adaptive reuse and conserving significant historic features, an approach that would maintain the site's character and defining features while addressing accessibility and programmatic issues. Nearly 70 percent of the participants in a *Minneapolis City Pages* online poll reject demolition, and a recent article in the business-oriented Minneapolis *Finance and Commerce* newspaper cited architects who said that the National Register designation should prompt city officials to reconsider their position. Nevertheless, the city is holding firm on demolition.

Finally, there is the Charlottesville Mall in Charlottesville, Virginia, an eight-block-long, sixty-foot-wide street designed in the mid-1970s by Lawrence Halprin and Associates, the only surviving Halprin-designed project in Virginia. (The other, a sculpture garden at the Museum of Fine Arts in Richmond, was demolished as part of the museum's expansion.) The mall, which serves as Charlottesville's open-air living room, is notable for the inclusive, citizen-based design process that informed its creation, its many subtle and innovative design solutions, and its careful regard for the area's social, economic, and architectural history. Its signature design element is four-by-twelve-inch utility brick, widely used in streets and alleys across America before the popularization of macadam and asphalt.

Following years of deferred maintenance, the city proposed numerous changes to the mall, including the addition of new fountains, play areas, and public art, and replacement of the signature bricks with standard four-by-eight-inch bricks. Collectively, these changes would have radically altered the mall's look and compromised Halprin's design. A coordinated public outreach campaign—accompanied by documentation of the site by University of Virginia landscape architecture students—ultimately shifted the discussion to rehabilitation of the Halprin design. Many of the proposed design elements were abandoned, and the signature four-by-twelve-inch bricks were retained.

I have long argued that the preservation movement, particularly when dealing with modern landscape heritage, must build bridges with designers, ecologists, and others and offer articulate, well-illustrated, and evocative solutions. In these three instances, efforts to broaden the conversation beyond traditional preservationists succeeded to varying degrees. These cases also demonstrate that when there is a diverse coalition—and the political will—the focus of efforts should be on innovative and embraceable rehabilitation preservation solutions.

Charles A. Birnbaum is the founder and president of the Cultural Landscape Foundation.

Peavey Plaza in Minneapolis, a two-acre public space designed by M. Paul Friedberg and completed in 1975. Although it was recently listed in the National Register of Historic Places, it is currently slated for demolition. Photo: © Keri Pickett, courtesy the Cultural Landscape Foundation.

MODERNITY, TEMPORALITY, AND MATERIALITY

A Discussion about the Conservation of Modern Architecture

CATHERINE CROFT is director of The Twentieth Century Society, based in London. She was formerly a historic buildings inspector at English Heritage and architectural adviser to The Theatres Trust.

HUBERT-JAN HENKET is an architect from the Netherlands. He is founding chairman of Docomomo International and a winner of the World Monuments Fund Knoll Modernism Prize.

JOHANNES WIDODO is co-director of Tun Tan Cheng Lock Centre for Asian Architectural and Urban Heritage at the National University of Singapore and a member of modern Asian Architecture Network (mAAN).

They spoke with **SUSAN MACDONALD**, head of Field Projects at the Getty Conservation Institute, and **JEFFREY LEVIN**, editor of *Conservation Perspectives, The GCI Newsletter.*

SUSAN MACDONALD Let's have each of you talk about your organizations—why they were formed and what they do.

CATHERINE CROFT We were founded in 1979 as the Thirties Society, in response to the threat to buildings of a broader period—buildings of the 1920s up to the outbreak of the war. From the beginning, we campaigned for the preservation of buildings of all styles and types, although in the early years, many of the people involved were particularly interested in deco buildings or revival styles. One of our first campaigns was to preserve the 1920s Lloyd's Building in London by Edwin Cooper. We weren't very successful, and part of the building was incorporated into Richard Rogers's new headquarters for Lloyd's in the mid-1980s. Now we have actually campaigned to have the Rogers building itself listed. That shows a huge movement in the type of buildings we're interested in. We're a charity with a small government grant, and the rest of our funding comes from individual members from all sorts of backgrounds. From the beginning, we've had more architectural historians working with us rather than architects, and we now have about two thousand members. The majority of our income comes from subscriptions and from organizing tours, including foreign trips. The profits we make are fed back into the campaign work.

MACDONALD Would you say that your main objectives are advocacy and education?

CROFT Casework is central to what we do, and that consists of advocacy on government policy, as well as campaigning for specific buildings. We also have a broad role loosely defined as education, which is changing public attitudes regarding the buildings that we care about.

HUBERT-JAN HENKET The development of my country at the start of the twentieth century was very much involved with modernity. Modernity created our social democracy and produced a variety of important buildings in the Modern Movement. Modernity is about achieving freedom and independence for all through progress in science and technology, an idea that started in the Enlightenment. In that period, the market economy came about, which itself led to the notion of constant innovation. That remains characteristic of our dynamic, fluid society—everything has to be continuously new. The other basic characteristic is temporality—things are not meant for eternity but for a short period of time. That is what modern architecture is about.

These purpose-made buildings are totally different from those more neutral buildings, which were built for a long period of time. The Dutch government asked me to do a survey of modern buildings in order to develop a proposal for what to do with them, and I carried this out with my assistant at the time, Wessel de Jonge. We considered it a pity to waste this knowledge and thought we should communicate with people in other countries to have an intellectual debate about this weird paradox: keeping throwaway buildings for eternity. We started in 1988 and invented the name Docomomo—Documentation and Conservation of the Modern Movement. At our first conference we started with twelve countries—a thirteenth joined at the conference—and we drafted a constitution. From the start, we tried to bring architects and architectural historians together, because architects on their own are rather subjective. At the moment, we are in sixty-three countries.

MACDONALD Is it true to say that what distinguishes Docomomo from other conservation-related organizations is that it was partly about sustaining the ideology of modernism?

Photo: courtesy Catherine Croft

> With modern buildings, there may be more questions to ask and more subtleties to understand, but it's not a totally different process.
>
> CATHERINE CROFT

HENKET That's a tricky question. As architects, we had the intention to stimulate the ideas of the Modern Movement because it's a way of thinking. The architectural historians didn't like promoting that way of thinking, so we put devotion to the ideas into a separate document, which we called the Eindhoven Statement.

JEFFREY LEVIN Johannes, yours is the newest of the organizations. Can you talk about its inception?

JOHANNES WIDODO Back in the year 2000, before the establishment of mAAN, several friends from different Asian countries met at a conference in Guangzhou, China, and we started discussing the state of modern architecture in Asia, including the demolishment of colonial buildings as the result of rapid economic growth. Some thought there was nothing wrong with demolishing colonial buildings because they reminded us of colonization, occupation, and cruelty. Others said, "No, it's part of our identity." And that raised the question: what is our identity? As we looked into our own curriculums, we were shocked to find that Banister Fletcher's *A History of Architecture* was still used in many schools in Asia as one of the textbooks for architecture—a book that considers Asian architecture as nonarchitecture. So what were the alternatives? Well, we had them in national languages—Chinese, Japanese—but not in English.

So we agreed to meet again in Macao in 2001 at a more formal conference, where we had the opportunity to connect with people from UNESCO, Docomomo, and ICOMOS. At our founding conference in Macao, we put together declarations that emphasized the principles of Asian modernity. There are many modernisms in Asia because we are cosmopolitan. Our history is layered, not just linear. Because of this layering, we produce a very hybrid and diverse architecture. To prove that, we embarked on a project called the Comprehensive Inventory to inventory our own buildings. We didn't trust the existing registries made by governments, which only serve a certain agenda. We wanted to go into the crowd and use students as a cheap army to go to different cities and do a comprehensive inventory.

We are also working together with other organizations. Ron Van Oers from UNESCO World Heritage in Paris has brought us together with Docomomo, ICOMOS, and UNESCO. We use these coalitions to generate awareness. We also sent a message to Docomomo—before you move into Asia, please rethink the state of our architecture. We are so diverse, it is impossible to pinpoint Asian modernity. Our modern architecture is not the same. Your template may not fit into the Asian situation.

HENKET I disagree. You give the impression that we have one fixed view on modernity. In 1996 we had a conference in Bratislava—you were there—titled "Universality and Heterogeneity." In Holland we used modernity to establish social democracy. In Hungary they used it in the early twentieth century as part of becoming an independent country. In Brazil they used it for nation building. The 2006 Docomomo conference in Turkey was called "Other Modernisms." Although we started off as being Euro oriented, it doesn't mean that we did not evolve rapidly. May I add that the conservation approach I am presenting here only represents my personal vision, created by the environment I am living in.

WIDODO The issue is miscommunication. Some subscribe to Docomomo—other ones do not, and there's some internal conflict even within different countries. So when you organized the "Other Modernisms" conference in Turkey, we purposely organized a similar conference in Tokyo in 2006 called "Our Modern—Re-appropriating Asia's Urban Heritage."

MACDONALD Isn't the difference that mAAN looks broadly at places that represented a wider interpretation of modernity, while Docomomo was unabashedly talking about the architecture that represented modernism? Their scope of interest is different.

HENKET We were interested in understanding what modernity, at least in our part of the world, really was, and in how we could safeguard it for future generations. Like it or not, what we are talking about is a paradox if you accept that modernity has to do with temporality and—up to now—the constant new.

MACDONALD Can I challenge you on that? Maybe it's terminology, but when I think about some buildings that are manifestations of this idea, I can't believe that an architect would have thought of these places as temporal. Unité d'Habitation has a solid permanence, as does some of Le Corbusier's later work. It's solid, it's heavy, and it's monumental.

Photo: Pieter Henket

> We were interested in understanding what modernity ... really was, and in how we could safeguard it for future generations.
>
> HUBERT-JAN HENKET

CROFT Le Corbusier—specifically in regard to the Unité—described enjoying the idea that the concrete would erode back into the sand that it's made of.

MACDONALD Right, but we at the GCI talked to a lot of architects about how they saw their work, and they always said they were hoping that their buildings would endure—that they had added something to society today and in the future. They often surprised me regarding how endurance of their buildings was really important.

HENKET If you believe in a dynamic society, which is the whole idea of modernity, then you've got a problem.

CROFT Then maybe what you need to do is to feel that your buildings can adapt and change in how you use them.

HENKET Yes, but in the postwar period, hardly any client wants to invest in flexibility. John Habraken in the sixties started this movement about flexibility and investing in the future of a building in Holland, in the United States, and in Japan. But his efforts failed because nobody wants to invest more in a building than he is sure to get back in the future.

CROFT The buildings that have proven most flexible over the years are not ones that were built with that in mind. The Victorian terrace house is staggeringly flexible, while the same is not true about some Rogers and Foster buildings where it was intended that the interiors could be reconfigured.

HENKET Modern buildings are mostly custom designed because functional requirements have become ever more specific and change rapidly. Traditional buildings in general had load-bearing structures that were neutrally positioned and dimensions that were oversized. These characteristics make adaptive reuse relatively simple.

MACDONALD You can make the point that at the end of the twentieth century compared to the beginning of the twentieth century, there were a lot more building typologies. There is a question of sustainability when those uses have changed. Even if buildings appear adaptable, there are many more types to start with—which means a wider range of challenges that need solutions.

CROFT Sometimes there isn't a solution. Structures like nineteenth century maltings buildings are really specific and tricky because the floor-to-ceiling height is not big enough for much else.

WIDODO In many Asian contexts we have this so-called shophouse or town house typology, which exists everywhere from India to China to Southeast Asia. It's very flexible and can be adapted for different kinds of functions. You can just buy one unit and develop a hotel, and so on. But you also have the experience of mass housing in Singapore—building development blocks. These are only able to sustain types of uses for maybe twenty years, and then they have to be demolished and rebuilt. As a result, Singapore is moving into the process of demolishing and rebuilding different types of public housing. The buildings themselves are not flexible because their size is so massive and difficult to modify. Smaller forms are easier. Medium-density high-rise is preferable to high-density high-rise.

MACDONALD How different are the conservation approaches in different parts of the world? Is it possible to have universal principles for the conservation of modern architecture, or is it specific to different parts of the world?

HENKET Within Docomomo, you see a different approach occurring toward conservation. At first we talked about restoration, the architect's original intent, and icons. In some places we are moving away from the icons because most of them have been done, and we are now embracing a broader meaning of conservation, ranging from basic restoration to reuse. In my opinion, the main goal of restoration is keeping something of the cultural value, whereas reuse is primarily a functional matter, and maintenance is primarily a technical thing. Maintenance, reuse, and restoration all belong to the same notion—trying to be more sophisticated with the existing building stock. There is one common thing, and that's ecology. We have to rethink our approach from continuously building new things to reusing what we've got.

CROFT But hasn't that always happened? Since the dissolution of the monasteries in Britain, people have reinterpreted and reworked existing buildings.

HENKET I still come back to the fact that an industrial society wants production—because if it doesn't produce, the economy

stops. Production means temporality and the constant new.

MACDONALD You are suggesting that the basic premise of conservation and sustainability is universal. But how do you go about that?

HENKET Through awareness politics and legislation.

WIDODO I think we agree on one point—that conservation should be viewed as a way to manage change, rather than a way to freeze artifacts. It's not possible to freeze things because everything changes, and if we want to keep buildings from an ecological point of view, we need to recycle. Adaptive reuse is one way to go.

MACDONALD Johannes, you mentioned that you thought that the Asian context was somewhat different. We know that in conservation practice in Asia, how you make conservation decisions differs due to the importance of intangible values.

WIDODO You cannot avoid change. The intangible is what is permanent, while the tangible is nonpermanent. That is probably the simplest way of describing how we treat architecture. Architecture is the manifestation of our needs and our beliefs. When looking at temples like Borobudur, we consider them as texts—texts to convey Buddhist teachings. When the Chinese build a pagoda, it is actually a presentation of that philosophy. Similarly, we replace the pagoda from brick to concrete or steel, as long as it continues to function as a text.

CROFT But those intangible things are the hardest things to maintain, particularly through a change of use. For example, there are market buildings in Brixton in South London that were to be torn down. They were initially rejected for listing because they were not thought architecturally significant—but then were listed for their role in the history of the local Afro-Caribbean community. Listing has saved them, but they now house restaurants where yuppie Londoners come for a night out with a slight edge. You struggle to buy yam anywhere now. The markets are losing their significance for the community they were preserved for.

LEVIN Other than the temporality issue that's been raised, is there really a distinction between conservation of modern architecture and older architecture?

CROFT I don't think there is any fundamental difference.

WIDODO That's why we say that the purview of mAAN goes from the Silk Road until today.

HENKET There is a distinction, as far as the material is concerned. An industrial product is completely different from a handmade product and not meant to last. If you go to a building site today in our country, there's not a craftsman around. Everybody is just fixing things. It's a totally different trade. Craftsmen are rare.

CROFT Why is that such a fundamental difference from a Victorian architect going on site and seeing bricks being laid instead of timber and frame and wattle and daub construction?

HENKET Because in Victorian times, a bricklayer was cheap and materials expensive. Now the materials are cheap and labor costs are high. Today we talk about a building industry. We don't talk about a craft anymore. Society has changed, so our goals and requirements have changed. The materials we use, the way we combine them, and the ways they behave are very different.

MACDONALD Johannes, do you think that the conservation of modern architecture in Asia is part of the continuum of conservation practice, or is it different from how you approach the conservation of other eras?

WIDODO We see modernity as a continuum. It's not based on periodization. We can't possibly make a periodization of the typologies, for example.

LEVIN Does the difference in building materials have consequences for conservation?

HENKET You can't even get the materials any longer. Often industrial products will not be on the market after twenty years.

CROFT But you can't get some older materials. You can't get green oak easily to do timber frame, you can't get certain mortars, you can't get a lot of stone, and you can't get certain glass.

HENKET Glass is a fair example, but stone isn't—because you can find the quarries. For the Barcelona Pavilion by Mies van der Rohe, they went back to the same quarries that Mies got his material from.

MACDONALD If you think of buildings constructed of a stone like magnesian limestone—which are found in parts of Europe—you can't get that material anymore. But even if you could, you wouldn't want to use it because you know it won't last. It leaves you with the same challenge as dealing with modern materials.

HENKET A tree will grow. Industrial products are man-made. We have changed the building industry, and therefore the way we conserve buildings will be different. The original material is a difficult item in industrialized buildings.

WIDODO Can we still apply the concept of authenticity to modern buildings?

MACDONALD Maybe authenticity means something different with respect to modern buildings.

CROFT There's always that discussion, "Oh, if this product had been available, then the architect would have used it." This is said

with postwar buildings in particular. We would never dream of saying that when conserving a Georgian town house.

HENKET It is a very different task to conserve modern buildings. In our country, conservation architects are slowly disappearing. An architect who is ethically and technically well trained can also talk about buildings thirty to fifty years old. So conservation is becoming something different. We should train architects to appreciate the life cycle of buildings and to learn how best to maintain, reuse, and transform them, as well as learn to design new buildings. It's not either building new buildings or conserving buildings—it's a combination.

CROFT I don't think a fundamentally different approach is needed. The first stage of working on any conservation project is gaining an understanding of the building's history, including the history of its use. With modern buildings, there may be more questions to ask and more subtleties to understand, but it's not a totally different process.

MACDONALD People might need more help knowing how to do that, as they may not be familiar with the process.

CROFT Yes, but then there are far more documentary sources available on the whole to assist with that. Understanding the specifics of past use is critical but sometimes gets forgotten.

LEVIN Beyond the use of industrial materials, are there other challenges specific to the conservation of modern buildings that distinguish them from the conservation of other built heritage?

HENKET They're less flexible.

CROFT Well—sometimes they are and sometimes they're not. Sometimes they're basically huge open spaces.

HENKET But on the whole, they are less flexible. Most modern buildings are economically designed so the load-bearing structure can carry a certain amount but never more than absolutely necessary. Besides, the dimensions of spaces are minimal.

CROFT There's nothing less flexible than a medieval parish church whose significance is in its whole volume and precise layout, along with the fittings and the surfaces. Compare that to a postwar public housing estate. With the latter, there are actually quite a lot of areas where you could make fairly radical alterations.

HENKET Yes, but in the past, buildings were meant to last—and because they were meant to last, they were much more neutrally designed than we design them nowadays. Don't underestimate the influence of ever more specific requirements.

MACDONALD Do you think that was conscious in the past? Isn't that just how buildings were built, and so the result of it is that they're more enduring?

HENKET Conscious or not, what occurred from the eighteenth century onward is that buildings became more specific. Today the economy of the building is the overriding factor. Things are calculated so people don't build more than absolutely necessary. If you want to change it to other purposes, you're limited to what those purposes might be. We also change our building requirements rapidly for safety, environmental, and comfort reasons.

MACDONALD But the need to adapt buildings to new requirements is the same, whether it's from the fourteenth century or the twentieth century.

HENKET Changeability depends on the building's size. If there is sufficient space, you can fit in all sorts of things, as long as the performance of the materiality fits the new requirements.

MACDONALD One problem with midcentury modern houses is that they were often very economical and small, and now everyone wants more bedrooms and bathrooms and a bigger kitchen. And there are all those office buildings that were designed to incorporate new technologies like computers but didn't anticipate that they would now require a fraction of the surface space they needed before. So yes, there are design issues for some building types that make them problematic to adapt. But whether they constitute a fundamentally different problem is still the question. What would you say are the outstanding challenges that we still need to address in order to successfully conserve modern buildings?

CROFT Concrete repair. We haven't got enough well-documented case studies about what to do, and we're struggling to reach a consensus on the best approaches. I've been teaching at West Dean College, and I'm conscious of telling people to essentially experiment, rather than providing them with proven solutions.

WIDODO Regarding materials in our case, it is timber, brick, plaster, and roof tiles.

HENKET I would add plastics and aluminum to concrete—all the new materials. And climate control.

CROFT Yes, we need good case studies that show how to improve the environmental performance of even pretty standard twentieth-century buildings, such as the classic postwar school. How do you make them function better environmentally without losing the original windows that are a huge part of those buildings?

MACDONALD One thing that is different about conserving modern buildings is who is doing the work. The people doing the conservation might be design architects, who come to it through their interest in modernism. They might be well versed in the

Photo: courtesy Johannes Widodo

> Conservation should be viewed as a way to manage change, rather than a way to freeze artifacts.
>
> JOHANNES WIDODO

ideas behind it, but they're not well versed in the general tenets or practice of conservation. On the other hand, you've got conservation architects who may be good with traditional materials but now are faced with building types and materials they're not familiar with. What skills do we need to address these issues? Do we need specialist training?

CROFT There's a question of whether we want to produce a separate profession—a restorer of twentieth-century or Modern Movement buildings—or do we want to broaden the education of conservation architects. I think the latter, because applying the same philosophy across all building conservation makes sense.

HENKET We have to be careful introducing more specialists into the building industry. Thirty years ago, we made buildings with five people around the table. Nowadays, with most of my projects, it's fifteen to twenty people. With so much specialization, nobody is taking overall responsibility for the original idea. This is happening in conservation as well. We need to train our architects to be broad and be able to undertake renovation projects and to know about maintenance and restoration. It's not just about conserving buildings. It's about conserving environments. I think in the United States that is happening, with the renewed interest in urban cities. Suburbanization is stopping and people are moving back into the cities. We need the type of architect who thinks as much about the overall built environment as about the buildings—about the past and the future.

LEVIN Is there anything else that we need to do in terms of advancing the conservation of modernism?

HENKET Educate the public at large. It's happening already, but should be done more. Educating children is extremely important. Help people become aware of their environment. In traditional societies, that was obvious because you were there always—whereas in our mobile society, that is different. Yet you have to.

CROFT It's becoming easier to do that. For a long time, the Thirties Society was a fairly inward-looking club, but with the Internet we're about to put all our notes from our tours online, so you can download them and take yourself on a walking tour. If we had more resources, we would be able to do iPhone app tours. Getting public consensus is part and parcel of our casework because only when government feels that a public consensus is developing will it take the initiative on listing a building.

WIDODO Publicity is important, whether it's in magazine articles, advertisements, as the backdrop for a television show—anything that helps to promote awareness and makes old buildings look cool, so that people want to be there.

LEVIN With the last twenty-five years of development of organizations focused on the preservation and conservation of modern architecture, what kind of progress do you think we've made?

CROFT The big shift has been broader public appreciation of the buildings of the period, but also a feeling that it is appropriate to look analytically at architecture that is not widely popular at the moment. We should be ahead of that fashion curve, trying to make sense of what to keep. When we started proposing postmodern buildings for listing, most people said, "They're horrible," and "Absolutely, no." At some point we will be listing the best of those postmodern buildings, but it isn't happening yet. Still, there has been a huge shift. The value of the recent past is definitely accepted.

HENKET And that went quicker than we thought. In Docomomo there's a change in approach from the icons to the ordinary. The basic question is how to keep the intangible in the reuse and renovation process—because that's really what matters.

WIDODO We're moving into more youth education, hands-on workshops, and training on sites, in cooperation with corporations, governments, and stakeholders. We're also working with all these different organizations because we now have a common purpose—to prevent destruction of our heritage from rapid development and greed, which have become real threats. We put a lot of emphasis on rejuvenating the organization itself by giving opportunity to people under forty to take leadership and to use social media and the Internet more intensively. The youth are starting to feel it is their part to rebuild knowledge, and to create approaches based on the experience that they have. So the seeds we put down twenty years ago are starting to grow.

Key Resources

Conservation of Modern Architecture

ONLINE RESOURCES, ORGANIZATIONS, & NETWORKS

Cultural Landscape Foundation: http://tclf.org

Docomomo International: www.docomomo.com
Includes conference proceedings, technical dossiers, and an international register of selected properties, from over the past two decades.

English Heritage Twentieth Century Listing: www.english-heritage.org.uk/caring/listing/showcase/20th-century-listing/

Getty Research Institute Architecture and Design Collection: www.getty.edu/research/special_collections/highlights/architecture_design/

ICOMOS International Scientific Committee on Twentieth Century Heritage: www.icomos-isc20c.org
Includes a heritage tool kit and advocacy information on international safeguards for twentieth-century heritage.

Iconic Houses Network: www.iconichouses.org/

International Committee for the Conservation of the Industrial Heritage (TICCIH): www.ticcih.org/

International Union of Architects (UIA): www.uia-architectes.org/en
Index of modern heritage, including a network of architecture professionals and resources for education and professional development.

Los Angeles Conservancy: The Sixties Turn Fifty: http://lac.laconservancy.org/site/PageServer?pagename=60sHomePage

mAAN (modern Asian Architecture Network): www.m-aan.org
Resources dedicated to research, preservation, and revitalization of modern Asian architecture.

Twentieth Century Society: www.c20society.org.uk/
Focused on advocacy and safeguards for architectural heritage and design in the United Kingdom.

BOOKS, JOURNALS & CONFERENCE PROCEEDINGS

Back from Utopia, edited by Hubert-Jan Henket and Hilde Heynen (2002), Rotterdam: 010 Publishers.

Conserving Twentieth-Century Built Heritage: A Bibliography, edited by Susan Macdonald and Gail Ostergren (2011), Los Angeles: Getty Conservation Institute. www.getty.edu/conservation/publications_resources/pdf_publications/pdf/mod_arch_bib_aug11.pdf.

"Current State of Modern Asian Architecture Discourse and Networking" by Johannes Widodo, *Journal of Architectural Education* 63, no. 2 (2010), 79–81. http://onlinelibrary.wiley.com/doi/10.1111/j.1531-314X.2010.01066.x/abstract.

Docomomo Journal 29: "Modernism in Asia Pacific," edited by Sheridan Burke (Sept. 2003).

Forum Journal 27, no. 2: "Modern Landscape Architecture: Presentation and Preservation," edited by Charles A. Birnbaum (Winter 2013).

Modern Architectures: The Rise of a Heritage, edited by Maristella Casciato and Émilie d'Orgeix (2012), Wavre, Belgium: Mardaga Editions.

Modern Matters: Principles and Practices in Conserving Recent Architecture, edited by Susan Macdonald (1996), Shaftesbury, Dorset: Donhead.

Preservation of Modern Architecture by Theodore H. M. Prudon (2008), Hoboken, NJ: John Wiley and Sons.

Preserving Post-war Heritage: The Care and Conservation of Mid-Twentieth Century Architecture, Proceedings of the EH Conference, London, UK, 1998 by English Heritage, edited by Susan Macdonald (2001), Shaftesbury, Dorset: Donhead.

Twentieth Century Building Materials: History and Conservation, edited by Thomas Jester (1995), New York: McGraw-Hill.

UNESCO World Heritage Series No 5: Identification and Documentation of Modern Heritage. http://whc.unesco.org/en/series/5/

Zonnestraal Sanatorium: The History and Restoration of a Modern Monument, edited by Paul Meurs and Marie-Thérèse van Thoor (2010), Rotterdam: NAi Publishers.

For more information on issues related to the Conservation of Modern Architecture, search **AATA Online** at **aata.getty.edu/nps/**

GCI News

New Projects

NATIONAL SCIENCE FOUNDATION AWARD

The National Science Foundation (NSF) recently awarded funding to a GCI collaborative research project to develop and test an "opto-electronic nose" that monitors air pollutants in museum environments. The GCI team—which comprises senior scientists Michael Schilling (co-principal investigator of the NSF grant) and Jim Druzik—will focus on testing the new sensor. Kenneth S. Suslick, Marvin T. Schmidt Professor of Chemistry at the University of Illinois at Urbana-Champaign, is the principal investigator and developer of the sensor arrays. This project is being undertaken within the framework of GCI's Managing Collection Environments Initiative.

For many years, GCI scientists have studied gaseous pollutants, their effects on museum collections, and analytical techniques for measuring their concentrations (see *Monitoring for Gaseous Pollutants in Museum Environments*, available as a free download in the PDF Publications section of the GCI website). Many gaseous pollutants cause irreversible chemical damage, even when present at trace levels of concentration. While pollutant concentrations tend to remain low in museum galleries with their constant air circulation, they may reach harmful levels inside display and storage cases because the gases released by the materials used to construct the cases and the works of art are trapped. Tools to measure pollutant concentrations in museums range from inexpensive, direct readout devices for single pollutants to instruments that measure multiple pollutants and require expensive laboratory analysis.

In the NSF-funded project, the research group will develop small, unobtrusive, low-cost colorimetric sensor arrays capable of accurately measuring, at extremely low concentration levels, a wide range of gaseous pollutants that pose risks to works of art. GCI scientists will use the newly developed sensors to monitor air quality in galleries, display cases, and storage cases in cultural institutions throughout Southern California, including the Getty Museum and Getty Villa. This work will lead to improvements in storage conditions for museum collections. Conservation applications of the sensors also include testing the efficacy and useful lifetimes of pollution adsorbents for museum cases and evaluating the permeability of protective barrier film coatings on metal and plastic works of art.

Managing Collection Environments is a multiyear initiative that addresses a number of compelling research questions and practical issues pertaining to the control and management of collection environments in museums, libraries, archives, and other repositories. The initiative will combine scientific investigation with fieldwork that tests and refines practical solutions. Educational activities, ranging from short courses to expert meetings, and information dissemination, through print and electronic publications, support and extend the research activities. Throughout all phases of the project, the GCI will work in coordination with other international entities engaged in this area.

Artist Helen Pashgian being interviewed as part of the GCI's Art in L.A. project. Photo: Tom Learner, GCI.

ART IN L.A.

In 2012, Art in L.A. was launched as part of the GCI's Modern and Contemporary Art Research Initiative. Art in L.A. explores the innovative materials and fabrication processes used by Los Angeles–based artists from the 1960s onward and studies the implications these materials and processes have for the conservation of their work. While the project focuses on local artists, the concerns and questions that arise through this project are relevant to the conservation of modern and contemporary art in general.

As part of this project, the GCI is producing a series of short video interviews of some of the artists under study, in which they explain and demonstrate their materials and working processes and discuss their thoughts on the conservation of their work. Artists are chosen so that a range of materials and opinions regarding conservation are included, and these interviews will constitute a series of case studies that will contribute to discussion within the field on how to incorporate an artist's thoughts

and needs into a conservation strategy.

The first of these videos, *Seeing through Glass* (available on the GCI YouTube channel), focuses on the art of Larry Bell. Although Bell works in a range of media, he is best known for his use of glass and an industrial process called vacuum deposition of thin films. The process deposits, under vacuum, a micron-thin layer of metal or other material that modifies the way glass panels absorb, reflect, and transmit light, to stunning effect. Bell was filmed in his studio in Taos, New Mexico, discussing and demonstrating his working process and sharing his thoughts on the conservation of his work. For Bell, "There is a patina that comes to everything with age. I don't try and fight that patina. I like it."

The second video in the series (available summer 2013) will feature Helen Pashgian. Long overlooked, Pashgian is now recognized as an important artist from the 1960s to the present day and as a significant contributor to the Light and Space movement. In the 1960s and 1970s, she used cast polyester resin to create translucent sculptures, delicately colored and often intimate in scale. Worried about the toxicity of polyester resin, she eventually switched to cast epoxy resin and sheet acrylic. The video includes footage of her re-creation of a large, translucent polyester disc stolen from an exhibition in the 1970s. Pashgian has been firm in her opinions about conservation, with a low tolerance for any sign of damage, insisting, "If there is a scratch on the surface, that's all you see."

This series of videos complements the ongoing technical study of materials used by Los Angeles artists, for which analytical techniques have been developed. It also builds on the in-depth study of De Wain Valentine's polyester work of the 1960s and 1970s, which resulted in the GCI exhibition *From Start to Finish: De Wain Valentine's* Gray Column. The project included a publication and a thirty-minute video exploring Valentine's development of a new polyester resin to realize his monumental sculptures, as well as the conservation implications of this endeavor.

Project Updates

FIRST LACQUERS WORKSHOP HELD

In October 2012 the Getty Conservation Institute welcomed an international group of eighteen scientists and conservators to the Getty Center in Los Angeles to explore new procedures for uncovering detailed information about lacquered objects. The five-day workshop, entitled "Recent Advances in Characterizing Asian Lacquer," was the first in a series to be held at venues in the United States, Europe, and Asia.

Lacquers workshop participants examine results of a staining technique for lacquer cross sections, taught by instructor Nanke Schellmann, Academy of Fine Arts, Vienna. Photo: Dusan Stulik, GCI.

The workshop instructors—Michael Schilling of the GCI, Arlen Heginbotham of the J. Paul Getty Museum, and Nanke Schellmann of the Academy of Fine Arts, Vienna—presented a set of complementary tools, both low- and high-tech, for studying lacquers. These include a technique for precise sampling of individual lacquer layers, a procedure for characterizing lacquer using organic stains and microscopic examination, and application of an analytical protocol based on a specialized pyrolysis–gas chromatography–mass spectrometry (Py-GC-MS) technique coupled with custom tools for data analysis and interpretation.

The workshop provided unique opportunities for interdisciplinary dialogue and collaboration. Throughout the week scientists and conservators worked in research teams to study samples of historic lacquer from their own collections, putting new techniques into practice. Group discussions included invited specialists in historical Chinese-language literature on lacquer to add insight into participants' findings, as well as into larger issues facing the field.

The "Recent Advances in Characterizing Asian Lacquer" workshop series was developed from ongoing collaboration between the GCI and the Getty Museum, and it aims to support a growing international community of lacquer researchers dedicated to sharing information and ideas. It was organized as part of GCI Education's Research into Practice Initiative, which uses training workshops, colloquia, and similar events to present new scientific advances resulting from research undertaken by the GCI and its partners.

MEPPI ABU DHABI

In November 2012, the Getty Conservation Institute, with partners, organized the second workshop on the preservation of photographic collections to be offered by the Middle East Photograph Preservation Initiative (MEPPI). Held at New York University Abu Dhabi, the workshop included lectures and hands-on activities to present an overview of the current state of photograph preservation. MEPPI, whose primary aim is to identify and assess significant photographic collections and promote their preservation and visibility in the Middle East, is a key component of the GCI's Preservation of Photographs and Photograph Collections Initiative.

Experts from North America and Europe meet with Getty staff to discuss the study and treatment of Jackson Pollock's *Mural* (1943). Painting: University of Iowa Museum of Art, Gift of Peggy Guggenheim, 1959.6. Reproduced with permission from the University of Iowa. Photo: Stacey Rain Strickler, J. Paul Getty Museum.

Workshop lecture topics included overviews of photographic processes, best practices for storage and display, emergency preparedness and prioritization for preservation, best practices for digitization, future directions, fund-raising, and methods of raising public awareness. The workshop was led by five main instructors: Bertrand Lavédrine of the Centre de Recherche sur la Conservation des Collections, Paris; Debra Hess Norris of the University of Delaware; Klaus Pollmeier of the Staatliche Akademie der Bildenden Künste, Stuttgart; Nora Kennedy of the Metropolitan Museum of Art, New York; and Tram Vo of the GCI.

Workshop participants currently are in an eight-month period of assigned practical work to be carried out at their own institutions using information and skills learned at the workshop. A follow-up meeting, to be held in Istanbul in September 2013, will allow instructors and participants to review progress over the previous months.

Through its activities, MEPPI will stimulate the growth of professionals in the region who understand its photographic heritage and who are committed to advocating and caring for it over the long term. The initiative seeks to learn and share more about photographic heritage in the Middle East and to promote its value to the public and to decision makers.

EXPERTS' MEETING FOR *MURAL*

In January 2013 the GCI organized with the Paintings Conservation Department of the J. Paul Getty Museum an experts' meeting of conservators to discuss the ongoing study and treatment of Jackson Pollock's *Mural* (1943). The painting, in the collection of the University of Iowa Museum of Art, is at the Getty for a two-year project of conservation and research undertaken by the GCI and the Museum's Paintings Conservation Department. The aim of the project is to improve the painting's aesthetic impact and to stabilize its physical structure, while contributing to a larger understanding of the materials and techniques used by the artist during the critical early moment in his career when the painting was made.

The last conservation of *Mural*, in 1973, included a wax-resin lining treatment that successfully mitigated a long history of flaking. However, the conservation also locked into place a sag in the canvas, resulting in a misalignment of the painted image with its rectangular stretcher. In addition, a varnish applied during this treatment has become dull, masking the vibrancy of many of the colors and obscuring the subtle variations of gloss one might expect from such a varied surface. Structurally, the 1973 stretcher is unable to support the considerable weight of the lined canvas.

At the experts' meeting, fifteen conservators from North America and Europe—all with knowledge and experience of Pollock's work or experience in treating large paintings—were invited to view the painting and engage in conversation about the painting's aesthetic and structural conservation issues—discussions that will guide the work of the Getty team. Although many aspects related to the Getty's study were covered, two of the more important discussions concerned options for addressing the misalignment of the painted image with the current stretcher, and addressed the extent to which the original architectural setting of the painting (the New

Egyptian conservator Ramadan Mohamed Salem Bedair and GCI project specialist and wall paintings conservator Lori Wong at work in the tomb of Tutankhamen during the spring 2013 campaign. Photo: Stephen Rickerby, for the GCI.

York home of Peggy Guggenheim) should be replicated in any future display.

Scientific and scholarly research undertaken by the GCI and the Getty Museum will focus on the materials and techniques used by the artist, with the aim of determining if any of the well-known characteristics of Pollock's later work—such as the use of house paints and his placement of the canvas on the floor while he painted—were part of his working methods in creating *Mural*. Archival research and early documentary photographs of the painting will inform the conservation treatment and the direction of the technical study.

In March 2014 the painting will be exhibited for three months at the Getty Museum; a second gallery will display technical research from the project, alongside a discussion of the choices made in the current treatment. The exhibition will be accompanied by a publication and a study day for conservators, curators, art historians, and Pollock scholars.

The January 2013 experts' meeting was made possible by the generosity of the Andrew W. Mellon Foundation.

TUTANKHAMEN

The GCI and Egypt's Supreme Council of Antiquities (SCA) began implementing a conservation plan for the wall paintings in the tomb of Tutankhamen in February 2013, as part of the ongoing collaborative project of the GCI and the SCA to conserve and manage the tomb.

The implementation of the conservation plan follows detailed investigation of the wall paintings, including condition monitoring and recording, scientific analysis of the materials and techniques of the paintings, and a program of treatment testing and evaluation. The aim is to provide a model for conservation planning and implementation in Egypt by addressing a number of issues: the promotion of modern principles and standards of conservation practice; appropriate diagnosis of deterioration and risks; selection of conservation materials based on systematic testing and development; and emphasis on the importance of deciding treatment methods and materials within a wider context of other conservation measures, including environmental control, dust prevention, and long-term condition monitoring.

Recent work concentrated on stabilizing the nearly thirty-five-hundred-year-old wall paintings in the burial chamber. The principal conditions requiring treatment include localized lifting of paint flakes and thin plaster washes, and loose and fragmented areas of plaster. In addition to these conditions, there is widespread dust deposition, as well as nonoriginal surface coatings and drips from undocumented previous treatments.

Training of local SCA conservators, an important part of the overall five-year collaborative project to conserve the tomb, also continued. Short information videos on the conservation work were also taken as part of the project and will be made available on the GCI website. The next field campaign will be in November of this year. The conservation of the tomb and its wall paintings is scheduled for completion by the end of 2014.

SEISMIC RETROFITTING

In February 2013 the Earthen Architecture Initiative's Seismic Retrofitting Project (SRP) undertook its most recent field campaign in Peru. The SRP is providing seismic retrofitting solutions for historic earthen buildings developed by the GCI and its partners—University College London, Pontificia Universidad Católica del Perú, and the Ministerio de Cultura del Perú—for use in countries where equipment, structural skills, and materials for seismic retrofitting are not readily available.

In Peru the SRP is designing and testing these methods on four types of historic earthen buildings. Using these buildings as case studies, the project will provide low-tech and easy-to-implement retrofitting techniques and maintenance programs for historic earthen buildings in South America to improve their seismic performance while preserving their historic fabric.

One of the prototype buildings under study is the Church of Santiago de Kuño Tambo in Cusco. This seventeenth-century adobe church has decorated surfaces that need to be assessed and protected prior to any retrofitting intervention. During the first week of the campaign, the GCI, in collaboration with Carleton University in Ottawa, conducted orthophotography of the church's wall paintings. Led by the GCI's Leslie Rainer, a wall paintings conservator, the team undertook a rapid assessment of the wall paintings to define the methodology for an upcoming condition assessment. The final day included a session

to discuss graphic and condition assessment techniques for wall paintings, with colleagues of the Cusco branch of the Peruvian Ministry of Culture, the Archbishopric of Cusco, and the local community. A grant to support conservation of the church is being provided by the Friends of Heritage Preservation—a small, private association of individuals that seeks to promote cultural identity through the preservation of significant endangered artistic and historic works, artifacts, and sites.

During the second week, the team traveled to Ica to visit the Cathedral of Ica. This eighteenth-century adobe and *quincha* structure—another of the project's prototype buildings—was heavily damaged by the 2007 Pisco earthquake. The project team met with bishop Monsignor Vera Colona and the architects and structural engineers undertaking the seismic retrofitting work, to discuss the development of the SRP-designed retrofitting construction documents for the cathedral. During the team's week in Ica, the minister of culture of Peru, Luis Peirano, joined with the GCI team to define the project's next steps and to view the cathedral's recently installed temporary shoring.

In the next campaigns, the GCI and its partners will conduct the condition assessment and protection of the Kuño Tambo wall paintings and finalize the construction drawings for the retrofitting of this church and the cathedral. The final outcome of the project will be the implementation of the retrofitting projects for Ica Cathedral and Kuño Tambo as model projects and the creation of a set of guidelines to implement retrofitting techniques and maintenance programs in similar buildings in South America.

GCI consultants photographing wall paintings in the Church of Santiago de Kuño Tambo to develop a rectified base image for condition assessment. Photo: Claudia Cancino, GCI.

Upcoming Course

CONSERVATION AND MANAGEMENT OF ARCHAEOLOGICAL SITES WITH MOSAICS

The GCI, in partnership with the Department of Antiquities of Cyprus and the Archaeological Research Unit of the University of Cyprus, is pleased to announce a second training course in the conservation and management of archaeological sites with mosaics, to be held in Paphos, Cyprus, in 2014. This training is part of the MOSAIKON Initiative, a partnership of the GCI, the Getty Foundation, ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property), and ICCM (International Committee for the Conservation of Mosaics). Begun in 2008, MOSAIKON is a strategic regional initiative that aims to improve the conservation, management, and overall stewardship of archaeological mosaics in the Mediterranean region, including both mosaics in situ and those in museum collections.

The Mediterranean region possesses an extraordinarily rich and varied archaeological heritage, including a vast number of mosaic pavements from classical antiquity. Some of these ancient mosaics remain in situ, while many others have been lifted and placed in museums and storage. The conservation and management of in situ mosaics on archaeological sites presents a complex set of challenges.

The 2014 training course will cover all aspects of conserving and managing archaeological sites with in situ mosaics, including documentation and recording; site management planning; deterioration mechanisms; basic conservation interventions, both preventive and remedial; and presentation and interpretation.

The course is aimed at midcareer professionals from the southern and eastern Mediterranean region who work on or have responsibility for archaeological sites with mosaics. As with the similar 2010 MOSAIKON training in Tyre, Lebanon, this course has three parts: a three-week workshop, an extended mentoring period during which participants carry out individual projects at their home sites or institutions, and a final workshop. The participants will be expected to commit to the full length of the course. The teaching language will be English.

The full course announcement and application will be available on the GCI website (getty.edu/conservation) in June 2013. Please send inquiries regarding the initiative to MOSAIKON@getty.edu.

Upcoming Symposium

FORTIETH INTERNATIONAL SYMPOSIUM ON ARCHAEOMETRY

The Getty Conservation Institute is pleased to co-host with the University of California, Los Angeles (UCLA) the Fortieth International Symposium on Archaeometry (ISA), May 19–23, 2014. This five-day symposium, held at the Getty Villa and UCLA campuses, will highlight recent advances in analytical technologies and new scientific findings on the analysis of archaeological and cultural materials. Topics as wide-ranging as the technology and provenance of ancient glass, metals, and ceramics and the reconstruction of ancient diets will be covered.

The symposium brings together international scholars from diverse fields, such as conservation science, physics, chemistry, materials science, geology, biology, computer science, archaeology, anthropology, and art history, to discuss the relevance and use of analytical methods in the study of the ancient world.

In addition to classic ISA session themes (e.g., archaeochronology, metals, bio-archaeology), special sessions will discuss looting and illicit trafficking of antiquities, as well as scientific evidence for the transition from the late Bronze Age to the early Iron Age.

Registration for the conference begins June 15, 2013. Due to space limitations, registration will be limited to 250 people. The language of the conference and materials will be English.

Extended abstracts for topics to be delivered at ISA 2014 will be published in advance of the conference. The deadline for abstracts is December 16, 2013.

For a complete description of the conference, costs, and registration form, visit the International Symposium on Archaeometry 2014 website: www.archaeometry2014.com.

Staff Updates

BARBARA FRIEDENBERG RETIRES

Photo: Cameron Trowbridge, GCI

Barbara Friedenberg, who served as a research database editor for AATA Online for over two decades, retired at the beginning of March 2013. For the past several years, she has been responsible for researching, verifying, and standardizing bibliographic information for all new titles abstracted in AATA. Furthermore, and most important, Barbara has edited all abstracts to AATA Online style standards—nearly 4,000 a year.

Barbara also played an active role in improving AATA's in-house production system, GAIA, and implementing upgrades to AATA's public interface, working closely with the Getty's ITS Application Team. She was the authoritative source whenever there were questions about any AATA record. Of the more than 120,000 records in AATA, most have in some way been improved by Barbara's excellent editorial skills and deep knowledge of the field of conservation. Those who have worked with her can also attest to her modest, hard-working character and quiet dedication. She plans to spend her retirement enjoying family and friends and exploring new pastimes.

New Titles

Ephemeral Monuments
History and Conservation of Installation Art
Edited by Barbara Ferriani and Marina Pugliese
Translated by Helen Glanville

Installation art is an evolving, often ephemeral medium that defies rigid categorization. It has also radically transformed the concepts of space and time and the experience of art. The conservation field is faced with unique challenges about the best ways to manage and preserve the essence of these works. How detailed can documentation get? When does the replacement of original components become acceptable? How does the field cope with the obsolescence of certain technologies? By exploring the questions and dilemmas facing those who care for art installations, this book intends to raise awareness and promote discussion about the various conservation approaches for these works.

This volume is the English edition of the first book published in Italy to address the history and conservation of installation art. With an introduction by noted art historian Germano Celant, it includes essays by museum director and art historian Marina Pugliese—tracing the evolution of this art form, beginning with the experimental exhibitions of the early twentieth century—and by contemporary art conservator Barbara Ferriani, who addresses the problems associated with the assembly and installation of these works, as well as their re-presentation and conservation. Other expert contributors address the specific nature of video installations, the role

of interviews with living artists, and tools and techniques for documenting ephemeral works of art. The second part of the book is dedicated to specific installations by artists including Mario Merz, Anselm Kiefer, and Bill Viola, whose works exemplify this art form.

Barbara Ferriani is a conservator and teaches conservation of contemporary art at the University of Ca' Foscari in Venice and at the Università Statale in Milan. Marina Pugliese is an art historian specializing in contemporary art techniques and conservation and the director of the Museo del Novecento (Museum of Twentieth-Century Art) in Milan.

Historical Perspectives on Preventive Conservation
Edited by Sarah Staniforth

This is the sixth volume to appear in the Getty Conservation Institute's Readings in Conservation series, which gathers and publishes texts that have been influential in the development of thinking about the conservation of cultural heritage. The present volume provides a selection of more than sixty-five texts tracing the development of the field of preventive conservation from antiquity to the present day.

The volume is divided into nine parts: Philosophies of Preventive Conservation, Keeping Things, Early Years of Conservation in Museums, Relative Humidity and Temperature, Light, Pests, Pollution, The Museum Environment and Risk Management, and Future Trends. Writings by such well-known figures as M. Vitruvius Pollio, John Ruskin, and Rachel Carson are complemented by selections from diverse sources, including early housekeeping books, eighteenth-century archivist manuals, and Victorian novels. Other seminal texts include John Evelyn's seventeenth-century tract on air pollution in London, and the founding manifesto of the Society for the Protection of Ancient Buildings by William Morris. There is also a wide-ranging representation of recent scholarship, including writings from non-Western traditions such as those of India and Japan. Each reading is introduced by short prefatory remarks explaining the rationale for its selection and the principal matters covered. There is also a bibliography.

Intended especially for students, this volume will also be of interest to conservators, museum curators, collections managers and others involved in caring for collections and objects.

Sarah Staniforth is museums and collections director at the National Trust in London.

These publications can be ordered online through the Getty Museum Store (shop.getty.edu).

For more information about the work of the GCI, see getty.edu/conservation and

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Conservation Perspectives, The GCI Newsletter is distributed free of charge twice a year 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 in the Conservation section of the Getty's website, www.getty.edu/conservation/.

The Getty Conservation Institute works to advance conservation practice in the visual arts, broadly interpreted to include objects, collections, architecture, and sites. It serves the conservation community through scientific research, education and training, model field projects, and the broad dissemination of the results of both its own work and the work of others in the field. In all its endeavors, the Conservation Institute focuses on the creation and dissemination of knowledge that will benefit the professionals and organizations responsible for the conservation of the world's cultural heritage.

The GCI is a program of the J. Paul Getty Trust, an international cultural and philanthropic institution that focuses on the visual arts in all their dimensions.

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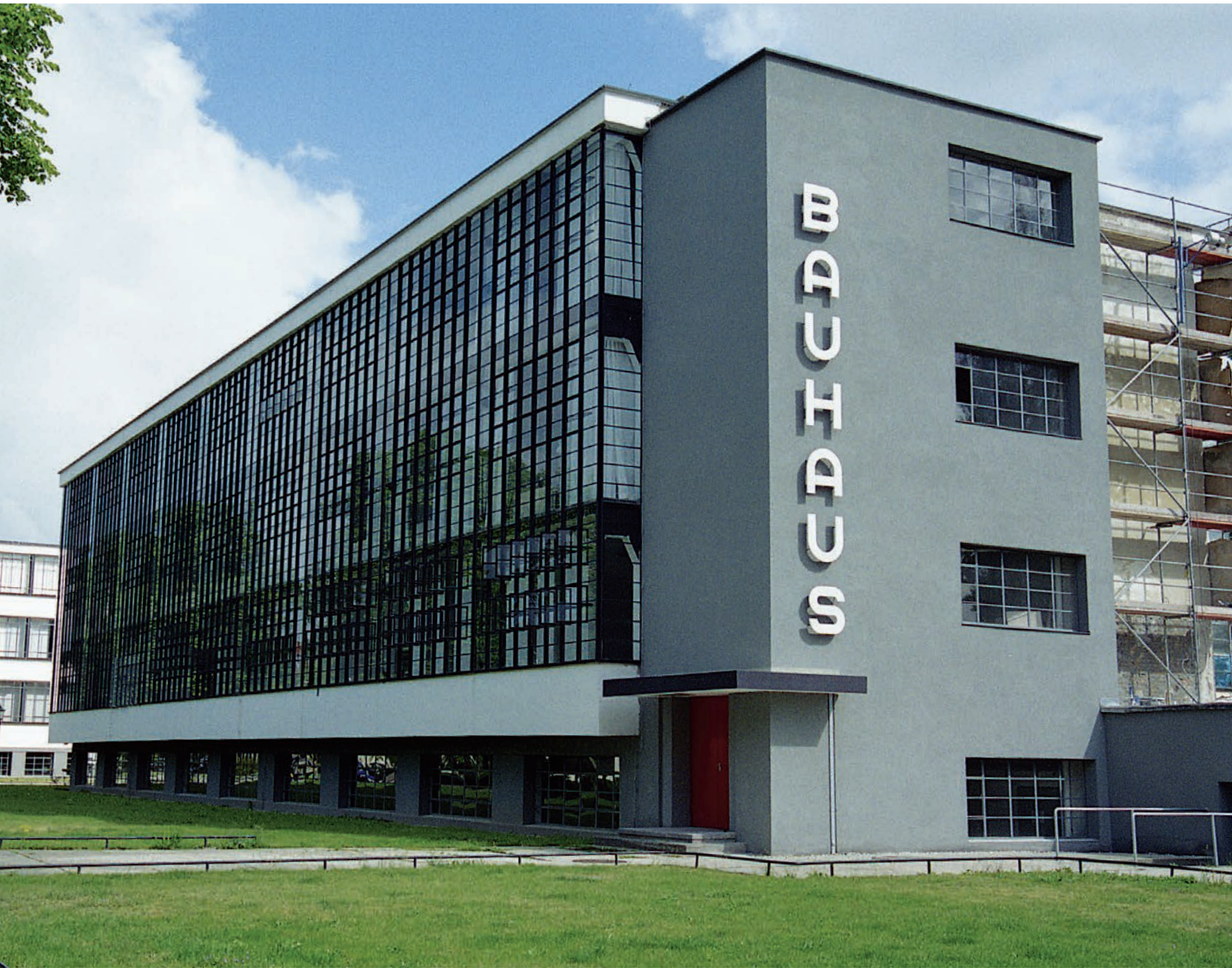

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Bauhaus workshop building in Dessau, Germany, designed by Walter Gropius and completed in 1926. Photo: Gail Ostergren, GCI.