

ing the substrate with a suitable solvent and clean cloth wipe. Then after preparation, the new material can be installed in a properly designed new sealant joint.

Glass replacement is sometimes warranted, either due to physical damage to the original glass or due to the benefits inherent with replacing older and often times energy-inefficient single-glazed curtain walls with high performance insulating glass (IG) units. Even early generation 1970s IG units may now need replacement, due to the breakdown of the metal edge bands and fogging of the IG unit with water vapor. Large glass units that pushed the limits of annealed glass for thermal stresses can crack and need replacement. Tempered glass can spontaneously break due to mineral inclusions in the glass and may require preventive measures to safeguard against glass fall-out. Laminating safety films are sometimes applied to the interior face of tempered glass to correct this problem.

Although the aluminum components of the curtain wall are considered corrosion resistant, mill finished aluminum can corrode over time with exposure to atmospheric pollutants and moisture. The anodized coating on finished aluminum can discolor and pit. Sometimes, the original color just looks old and tired, and like many building materials, requires a fresh coat of paint. High performance air drying paints are available for the repainting of aluminum curtain walls. These high performance paints are banned in some areas of

the country because of volatile organic compound (VOC) restrictions.

When maintenance and servicing are not deemed sufficient to correct the look or function of an older curtain wall, recladding of the entire building is possible. The new lightweight aluminum curtain wall can be installed directly over the old wall. Even with the weight of two exterior walls, the system is still usually lighter than a masonry wall system. Prior to implementing an overcladding project, however, it is critical to consider what will be buried in the wall, such as internally corroded metals, water damaged materials, and even molds and mildew.

The metal and glass curtain wall of the 1940s, 1950s, and 1960s was a product of its time: the continued desire for lightweight, high performance, and economical wall systems, coupled with industry advances from the war years. The industry has progressed with new standards of construction and methods for quality control testing to improve new construction. However, older metal and glass curtain walls can still serve for many years with careful maintenance and repair.

Notes

¹ *Architectural Forum* (March 1950): 83.

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Thomas C. Jester

International Perspectives on 20th-Century Heritage

Americans are not alone in their efforts to preserve cultural resources from the 20th century; other countries have likewise begun to consider more recent aspects of the built environment for their heritage value. In response to known and potential threats, particularly rapid change in the environment, the notion of heritage is slowly expanding to include significant 20th-century properties. Because the public often views heritage as a way to distinguish the past from the present, it is difficult to argue that

20th-century properties are worth preserving. This is particularly true in countries with resources dating back many centuries, where 100 years is considered a short period of time. The vast number of properties from this century also makes selecting properties worthy of preservation more challenging, a problem exacerbated by the relative dearth of objective historical analysis on 20th-century buildings and sites. Changes to properties over time and accelerated deterioration due to limited lifespans of some buildings also raise questions about integrity. With so many issues to

address, many countries have begun looking to neighbors for answers and perspectives in order to formulate approaches to 20th-century heritage.

A number of international forums have provided opportunities for professionals to discuss mutual problems, exchange information, and develop strategies for inventory, evaluation, protection, and conservation. One of the most comprehensive international meetings on 20th-century heritage was sponsored by the Council of Europe, an intergovernmental organization, in 1989. The Council of Europe meeting, Twentieth-Century Architectural Heritage: Strategies for Conservation and Promotion, examined approaches to conserving 20th-century architectural heritage. The formal recommendations of the meeting call on governments of the member countries to develop strategies for identifying, protecting, conserving, restoring, and promoting heritage from this century.

More focussed international initiatives are also underway. In 1989, DOCOMOMO International (the International Working Party for the Documentation and Conservation of Buildings, Sites, and Neighborhoods of the Modern Movement) was formed to: facilitate the exchange of documentation and conservation information, protect threatened Modern Movement buildings, stimulate interest in the Modern Movement, and create a register of significant Modern Movement buildings. DOCOMOMO is made up of over 30 national and regional working parties. The U.S. working party of DOCOMOMO, established in 1995, will be affiliated with the University of Southern California's School of Architecture and housed at Frank Lloyd Wright's Freeman House in Los Angeles. With biennial conferences and an extensive news journal, DOCOMOMO's activities represent a positive step toward creating a wider constituency for modern buildings.

Recently, the International Council on Monuments and Sites (ICOMOS) sponsored a seminar on 20th-century heritage in cooperation with UNESCO's World Heritage Centre and the

International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM). Twenty-five participants, representing 13 countries, met on June 18-19, 1995, in Helsinki, Finland, to discuss 20th-century heritage issues. The two-day seminar reviewed national efforts on this topic within an international context, explored methods to analyze the significance of 20th-century heritage, and considered how to identify 20th-century properties that could potentially be included in the World Heritage List (see sidebar for a list of the meeting recommendations).

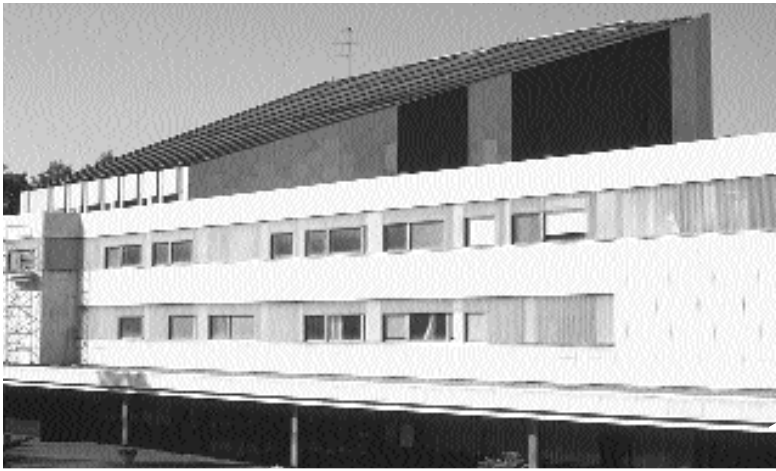
After briefly surveying international efforts to address "recent" heritage, participants discussed the identification, registration, and protection of 20th-century heritage. A central question emerged: whether different criteria than those used for "traditional" heritage are needed for evaluation. While opinions on this issue varied, most participants agreed that new resource types—urban and rural districts, social housing, transportation systems, modern landscapes, to name a few—currently pose evaluation challenges as countries move away from a purely "architectural" view of cultural heritage, and away from focusing on monuments and masterworks, to recognizing more vernacular buildings and sites. This evolving approach reinforces the continuity of heritage and takes into account social, ecological, economic, and cultural dimensions. In the United States, such dimensions are recognized when properties are evaluated, using the National Register's Criteria for Evaluation, for their association with American history, architecture, archeology, engineering, and culture.

Inventory techniques vary from country to country, and it was clear that thematic methods are useful. But continuity must be maintained by extending survey periods that often exclude much of the 20th century. Recognizing that the built environment in this century is extensive, a number of participants suggested that new recording technologies be developed to collect data, taking advantage of rapidly evolving computer applications.

All participants stressed the importance of education at all levels to raise awareness about recent heritage. Appreciation of "modern" environments is needed, particularly at the local level. The media should be used as much as possible to highlight important properties on an international level. On a professional level, better historical analysis—through objective thematic and monographic studies—is needed to avoid reliance on traditional art historical interpretation and premature judgements, often in the media, about significance.

Many of the original features that characterize Finland's Olympic Stadium were retained or sensitively modified during a recent rehabilitation. The stadium tower appears on CRM's cover.





The failing thin marble panels on Finlandia Hall, designed by Alvar Aalto (1962–71), in Helsinki, Finland, raise a serious question about the replacement of deteriorating modern materials: should new marble, or a more durable material with the same appearance, be used when replacement becomes necessary? Photo by Thomas C. Jester.

One of the best-known houses in the world, Frank Lloyd Wright's Fallingwater (1936) is a "modern" National Historic Landmark that could potentially be nominated for inclusion in the World Heritage List. Photo by Jack E. Boucher, HABS, NPS, 1985.

In a brief session on intervention and technical issues, the group discussed reuse approaches based on sustainability and expressed concern about repair and maintenance practices that may not take into account a building or site's historic character. Training, the participants agreed, is needed to address the use of distinctive technologies and more recent materials. Most felt that established conservation principles should be employed to care for recent heritage.

The final seminar discussion focussed on the inscription of 20th-century properties in the World Heritage List, which presently contains slightly more than 400 properties noted for their "outstanding universal value." Buildings more than 25 years of age can be considered, but to date only four properties dating from the 20th century have been inscribed in the World Heritage List—Auschwitz (Poland), Niemeyer and Costa's Brasilia (Brazil), Gaudi's Parc and Palace Guell and Casa Mila (Spain) and Skogskyrkogarden (Sweden). Of the two 20th-century properties nominated by the United States, one, the Wright Brothers National Monument, was withdrawn in 1981 because it was no longer materially associated with the first flight, and the other, Taliesin and Taliesin West by Frank Lloyd Wright, was withdrawn in 1991 for further study. A review of the State Parties' tentative lists (properties that may be nominated to the World Heritage List in the future) by ICOMOS International revealed that the number of 20th-century properties remains marginal except in some European countries and the United States.

The U.S. tentative list of 20th-century properties includes the General Electric Research Laboratory (Schenectady, New York),

Goddard Rocket Launching Site (Massachusetts), Lowell Observatory (Arizona), Pupin Physics Laboratory (New York City), Trinity Site (New Mexico), and Frank Lloyd Wright's Unity Temple (Oak Park, Illinois) and Robie House (Chicago).

Participants in the Helsinki meeting felt strongly that more properties from the 20th century deserve to be included in the World Heritage List, but couldn't agree on whether the existing criteria in the "operational guidelines" require changes to make more 20th-century nominations possible. However, most attending supported the requirement that the passing of one generation (25 years) is necessary to allow time for sufficient historical perspective when evaluating properties from this century. To aid ICOMOS and the World Heritage Centre with one component of its efforts to evaluate 20th-century heritage, DOCOMOMO International has been asked to develop a working document (including guidelines and new criteria for evaluation, if necessary) to select Modern Movement properties for inclusion in the World Heritage List. The working document will be discussed at the 1996 DOCOMOMO conference in Slovakia before being submitted to ICOMOS.

Few of the complex 20th-century heritage questions can be easily answered; properties from the recent past represent a large percentage of the built environment, and are diverse in character, suggesting that it will take time to develop successful identification, protection, and restoration approaches. However, it is encouraging to observe the gradual evolution of the notion of heritage worldwide and recognition that action must be taken to ensure that reminders of modern life are left to future generations.

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ICOMOS Seminar on 20th-Century Heritage, June 18-19, 1995

General Recommendations

1. It is noted that the 20th-century heritage should not be defined only with reference to its architectural forms, but taking into account the broad ecological, social, anthropological, economic, and cultural framework which forms the whole. There is a need to stress the importance of memory over considerations of materials.

2. The established principles of conservation are a valid basis for the safeguarding and care of the recent heritage.

3. While some of the heritage of the 20th century has particular characteristics that differentiate it from earlier constructions, it results substantially from the continuity of heritage. Its identification and inventory need to be updated on a regular basis. Attention is required to all types and even modest examples of such heritage, and in particular to urban and rural ensembles, housing schemes, and industrial heritage.

4. Systematic documentation of the 20th-century heritage in all its dimensions and in relation to its context is necessary. Such documentation should take into account the potential offered by new recording methods.

5. Due attention should be paid to the full spectrum of the heritage of the entire century, including buildings and ensembles built in new technologies as well as those using traditional building materials and structural forms.

6. It was recognized that the life cycles of man-made environments are mainly based on economic and functional considerations, and require critical choices to guide the process of selection of cultural properties that merit protection.

7. Considering the international character of much of the 20th-century heritage, networking and joint efforts are of particular importance. Such action should be taken both in relation to identification and inventory, as well as to education and training in collaboration with existing initiatives.

8. Research programs on specific problems concerning techniques and materials in restoration work with due respect to their aesthetic qualities should be encouraged. The publication of results from achieved experiences and preparation of corresponding specialized bibliographies are priority actions. Attention should be given to the economic consequences of restoration and regular maintenance with respect to employment policy and sustainable development.

9. In order to promote communication and raise public awareness, the media should be used to stress the importance of the 20th-century heritage especially to the young people. The international community should also draw attention to the qualities and values of specific cultural properties.

10. The Council of Europe Recommendation R (91) 13, gives the general guidelines for actions in this field.

11. A follow-up of the seminar is necessary. It should include the distribution of the working documents and keeping regular contacts between participants. If a future meeting is organized on this subject, it should be open to other disciplines and decision makers, and should take place in another part of the world.

Recommendations Concerning the World Heritage Convention

1. There should be an on-going process of consultations among ICOMOS, DOCOMOMO, and the World Heritage Centre in order to define the 20th-century heritage and develop a methodology for its identification.

2. It would be advisable only in exceptional cases to propose for inclusion in the World Heritage List properties that are less than 25 years old in order to allow sufficient time for historical perspective and scientific analysis.