

Introduction:

Most of our built environment today dates from post-WWII and is now a part of our collective cultural heritage. However, to what extent these sites and buildings deserve preservation and how this should be accomplished remains the subject of much discussion. This heritage presents us with unprecedented challenges. The number of buildings and projects involved, their scale and complexity and their shorter economic and cultural lifespans were not anticipated when heritage philosophies, policies and practices were formulated in the late 19th and early 20th century.

Rarity, once one of the prime arguments for preservation, is no longer enough or applicable and more than an appreciation of beauty or understanding of philosophical and aesthetic considerations is required. A more nuanced argument is necessary, which has to address the functional, practical, physical, technical and, in no small measure, the social and political factors that shaped the original design and construction. A preservation strategy that is appropriate has to be formulated on the basis of that knowledge and may find itself in conflict with those traditional principles.

The critical dialogue around the preservation of modern architecture has thus far focused on four major issues: a) how to determine significance within the ubiquity of buildings of the respective period and typology; b) changes in function and loss of (economic) value and resulting obsolescence; c) the perception of temporality and experimentation of materials and systems and how it suggests wholesale replacements and how this, in turn, affects the significance of the original material (authenticity) and, finally, d) the importance of design intent or what the original designer initially envisioned versus what actually got built and survives today.

When considering design and design modifications for new or continued use, these factors of ubiquity versus significance, historic building typology versus current functionality, design intent, newness and material durability versus the importance of the authenticity of the original fabric come into play. They are to be placed in the context of current code, life safety and sustainability requirements. Examples and case studies to be included in the general discussions will be drawn from both the US and abroad.

The term modern is here not intended as a stylistic description, although some of that may often be implied, but is to be seen more as a general demarcation of a time period. Besides relevant examples of pre-WWII architecture, the discussion will focus on the postwar period and include, aside from the immediate postwar architecture, brutalism, postmodernism and the recent dialogue around the concept of the “architecture of the welfare state”.

Format:

The format of the course is lectures and discussion of both general principles and actual case studies. Selected presentations by students will be encouraged and number will depend on subject and class size. Readings will be assigned for various topics.

Requirements:

The course has two types of requirements:

- 1) On-going reading assignments, which will be discussed in class.
- 2) Five (5) written assignments

Course Schedule

Session 1: September 6

Assignment 1 Out

1. Introduction

The discussion will address the overall structure of the course, its contents and requirements.

- a) Course outline
- b) Definitions and terminology
- c) Course readings
- d) Requirements
- e) Schedule
- f) Assignment

2. Theory, criteria, guidelines and charters

Recognizing the evolution of preservation and its theories and codas, the discussion will focus on how earlier writings and positions relate to the specifics of modern architecture and its particular challenges.

- a) Scrape versus Anti-scrape
- b) Authenticity
- c) Replacement materials
- d) Reconstructions
- e) Levels of intervention
- f) Role of design

Session 2: September 13

Assignment 1 Due – Assignment 2 Out

3. Programming, Use and Obsolescence

Modern architecture is in most instances characterized by its specificity of program and use. As a result, buildings are subject to frequent changes and charges of functional and economic obsolescence making understanding both historic and contemporary design principles and requirements imperative.

- a) Building typologies and their evolution
- b) Historic use
- c) Contemporary requirements
- d) Codes and regulations
- e) Underlying Assumptions and Expectations
Aesthetics, public health, light and ventilation
- f) Continued versus adaptive use

4. Typologies 1: Pavilions: Reconstructions and Receptions

Exhibition pavilions have often been places where aesthetic theories were tested out. Because they were also transitory and impermanent, they have often been reconstructed in later years. One of the considerations in the preservation and reconstruction of pavilions is the degree of accuracy and the levels of perfection desired and attained.

- a) Available information and interpretation
- b) Aluminaire (Lawrence Kocher and Albert Frey)

- c) Barcelona Pavilion, Barcelona, Spain (Mies)
- d) Pavilion l'Esprit Nouveau, Bologna, Italy (Le Corbusier)
- e) Philips Pavilion, Brussels, Belgium (Le Corbusier)
- f) Sculpture Pavilions, Kroller Moller Museum, Otterloo, Netherlands (Aldo van Eyck and Gerrit Rietveld)

Session 3: September 20

5. Typologies 2: Single Family Houses

An important part of the modernist heritage can be seen in the single family residence. The iconic ones have become house museums, while many lesser known ones because of their location became the subject of preservation battles and have been or are threatened to be replaced by McMansions.

- a) Philosophy and levels of perfection
- b) Saarinen House, Cranbrook, Bloomfield Hills, MI
- c) Fallingwater, Bear Run, PA
- d) Glass House, New Canaan, CT
- e) Farnsworth House, Plano, IL
- f) Eames House, Los Angeles, CA
- g) VDL House, Los Angeles
- h) Villa Tugendhat, Brno, Czech Republic
- i) Villa Savoye, Poissy, France
- j) Villa Sonnenveld, Rotterdam, The Netherlands

6. Typologies 3: Residential suburbs

Immediately before and after WWII many residential suburbs were constructed to accommodate the ever growing housing needs and move away from the inner cities. Many of the postwar developments were in no small means made possible by the financing available under the so-called GI Bill (officially titled the Servicemen's Readjustment Act of 1944).

- a) Planning
- b) European examples and its influence on the US
- c) GI Bill and FHA
- d) Preservation issues
- e) Case studies: Greenbelt MD, Levittown NY, Mar Vista CA

Session 4: September 27

7. Typologies 4: Public housing and the 'Architecture of the Welfare State'

One of the major ideas of modernism was the need for decent and affordable housing often owned and operated by government or public benefit corporations. While much of this was low rise in the prewar period, quickly that housing became multistoried particularly after WWII. In more recent years, particularly in the European context, these efforts have been referred to as the 'architecture of the welfare state' because of its relationship to more liberal social policies. In the US often references to the now demolished Pruitt-Igoe project are used to denounce modern architecture in general and public housing in particular. This complicates preservation.

- a) Definitions (public, social, affordable etc)
- b) Standards and minimums

- c) European examples
- d) FHA and other agencies
- e) Search for efficiencies: unit masonry size, elevator (skip stop) and prefabrication
- f) Preservation issues: architecture versus perceptions
- g) Hillyard House, Chicago, Bertrand Goldberg
- h) Robin Hood, Tower Hamlets, UK, Allison and Peter Smithson
- i) Park Hill, Sheffield, UK
- j) Chatham Towers, New York, Kelly and Gruzen
- k) Cedar Riverside, Minneapolis, MN, Ralph Rapsom
- l) Roosevelt Island, NY, Johnson, Johansen a.o.

Session 5: October 4

Assignment 2 Due – Assignment 3 Out

Typologies 5: Community Facilities

8. Community Facilities: Churches and Synagogues

With the population shift from the cities to the suburbs came also a need for new community facilities such as churches, synagogues, schools and shopping centers. With regards to religious facilities, this was also a time for theological and liturgical changes resulting in many innovative designs for buildings and the incorporation of art.

- a) Evolution of typology in the postwar decades
- b) Liturgical changes and Vatican II
- c) Ronchamp, Le Corbusier
- d) St. John's Abbey, Collegeville, MN, Marcel Breuer
- e) Temple Beth El, Southfield, MI, Minoru Yamasaki
- f) Unitarian Church, Midland, MI, Alden Dow
- g) First Presbyterian Church, Stamford, Ct by Wallace Harrison

9. Community Facilities: Schools

Necessitated by demand school design underwent a major change reflecting changes in pedagogy, health standards, class size and racial integration. New school construction took place in both the city and the suburb.

- a) Evolution of schools before and after the war
- b) Pedagogy and health
- c) Underlying educational principles: open plan, finger plan etc
- d) Standards
- e) Prototypes and prefabrication
- f) Current trends and implications
- g) Crow Island, Winnetka, IL, Eliel and Eero Saarinen, Saarinen and the firm of (then) Perkins, Wheeler and Will.
- h) Riverview High School, Sarasota, FL, Paul Rudolph
- i) Chorley High School, Middletown, NY, Paul Rudolph
- j) SCSD

Session 6: October 11

10. Typologies 6: Transportation

The end of the 19th and the first half of the 20th century saw considerable changes in transportation and the creation of entirely new building typologies. The most dramatic one was the development of the airport. The continued change of this typology continues to challenge preservation efforts.

- a) Types of transportation
- b) Evolution after WWII
- c) Programming and use
- d) Prewar and immediate postwar airports
- e) Airports: JFK
 - a. TWA
 - b. PanAm
 - c. National Airlines
- f) Airports: Dulles

Session 7: October 18

11. Project discussions and presentations

Session 8: October 25

12. Typologies 8: Industrial and Laboratory Complexes

The beginning of the 20th century was characterized by the construction of many manufacturing facilities for such industries as the automotive one. They became much publicized and visited by architects from all over the world. The immediate postwar decades saw a period of construction of major research and laboratory facilities.

- a) Typology: plants and laboratories
- b) Scale, programming and economics
- c) Use and reuse
- d) Van Nelle, Rotterdam, The Netherlands, by Brinkman & van der Vlugt
- e) Lingotto, Fiat factory, Turin, Italy
- f) Zollverein XII, Düsseldorf, Germany
- g) GM Technical Center, Bloomfield Hills, MI, by Eliel/Eero Saarinen
- h) IBM Yorktown, New York, by Eero Saarinen
- i) IBM, Rochester, MN, by Eero Saarinen
- j) Bell Labs, Holmdel, NJ, by Eero Saarinen and Kevin Roche/John Dinkeloo

Session 9: November 1

Assignment 3 Due – Assignment 4 Out

13. Typologies 9: Interiors

While modern furniture achieved recognition early, the modern interior as a whole remains a challenge. Ideas of craft or workmanship of finishes and millwork plays hardly any longer and the interior is subject to changes because use or style. Many have been severely altered or been demolished. The earlier option of salvaging interiors for museum installations is less applicable.

- a) The modern interior and the rise of a discipline
- b) Use and reuse: saleable vs. residential
- c) Furniture, finishes and fabrics
- d) Preservation challenges: design and materiality
- e) Museum rooms vs. occupied spaces
- f) Little House, FLW
- g) Aalto Room
- h) Alexander Girard

Session 10: November 8

Election Holiday

No class

Session 11: November 15

14. Color and Art

The study and use of color and the integration of art into buildings were an important part of the modernist architectural and design vocabulary. Interiors and spaces and their furnishings were carefully studied and selected creating a visual appearance quite different from the one we have known from architectural black and white photographs from the period. In addition, work of individual artists was often incorporated into buildings from the beginning.

- a. Theory
- b. Albers, Itten and Le Corbusier
- c. Impact on design and use of color
- d. Art in buildings: Noguchi, Albers and Miro
- e. Villa Savoye, Poissy, Le Corbusier
- f. Stuttgart, Le Corbusier

Session 12: November 22

15. Detailing Modernism 1: Facades (Glass and Transparency)

Glass and glazing was and is an essential feature of modern architecture because of daylight coming in, the view out and early on the perceived health benefits. Light and air. Changes in technology for both manufacturing and installation as well as the role of light and air in design and architecture pose new preservation challenges.

- a) Types of glazing and its development
- b) Health and therapy
- c) Inside versus outside
- d) Modern developments and visual implications
- e) Fagus Werke, Alfeld, Gropius and Meyer
- f) Zonnestraal, Hilversum, Duiker and Bijvoet
- g) Maison de Verre, Paris, Pierre Chareau
- h) Crown Hall, Chicago, Mies
- i) Curtain and curtain wall design
- j) Case studies: Lever
- k) Case studies: UN
- l) Case studies: Kahn at Yale

Session 12: November 29

Assignment 4 Due – Assignment 5 Out

16. Detailing Modernism 2: Miracle Materials Then and Now

The postwar decades saw the introduction and/or proliferation of new materials and material assemblies. While innovative and creative at the time, many now present complex philosophical and technical issues.

- a) Fabrication
- b) Aluminum
- c) Laminates and Plastics
- d) What to preserve and how
- e) Case Studies
 - Monsanto House
 - Wilson House

Session 13: December 6

No class

Session 14: December 13

Assignment 5 Due

17. Standardization, Prefabrication and Preservation

With the industrial revolution also came the ever growing need and ability to standardize production and assembly. This trend was further advanced during WWII for production when speedy assembly was required and less skilled labor was available. In the postwar period many of these techniques found application in the commercial and residential development and building trades. The custom uniqueness of early centuries was replaced by the customization of standard product raising preservation questions.

- a) Definitions
- b) Role of the industrial revolution, manufacturing and the automobile assembly
- c) Early examples
- d) Preservation issues
- e) Textile blocks: Wright and Dow
- f) Case Studies
 - Lustron
 - Cemesto
 - Other

18. Summary

Assignments:

General:

For individual classes a series of reading assignments will be identified and distributed at appropriate times. These reading assignments generally deal directly with the subject to be discussed in class or the specific assignment to be completed by the student.

Each reading will be distributed via e-mail and posted for reference and future use.

Specific Assignments Required:

Throughout the semester the student will be required to complete at least five (5) assignments. The assignments will be written and illustrated as required and are expected to be not less than six (6) to ten (10) pages long unless noted otherwise. In addition, the student may be asked to discuss the assignment in class.

The five assignments consist of two (2) short ones, one at the beginning and one at the end of the semester, and three (3) longer ones.

Assignment 1: Handed Out: September 6 – Due: September 13

Based on your knowledge and interest to date, please list five (5) buildings or sites that are in your opinion threatened. The examples should be post-WWI, can be of any typology and anywhere in the world.

Your listing should have three parts: 1) Description of the resource; 2) Statement as to why you believe it to be significant and in what context and 3) Nature of the threat.

Overall length not to exceed three pages.

Assignment 2: Handed out September 13 – Due October 4

Three core and interrelated questions are generally raised in discussing the approach and philosophical issues in the preservation of modern architecture. They are the relative role and importance of: authenticity, design intent and reconstruction. Discuss one of these in the context of existing charters, statements or guidelines like the Athens, Venice or Burra Charters, the Secretary of the Interior Standards and Guidelines for instance.

Assignment 3: Handed out October 4 – Due November 1

For Assignment 3 the student will select – in consultation – a building or building complex designed by a modern architect like Le Corbusier, Mies van der Rohe, Breuer etc. This assignment requires a detailed analysis and evaluation of the decisions made and the resulting design, technical and/or material changes. This will have to be illustrated in narrative form but also graphically using photos, graphics and/or sketches. Issues to be addressed can be such items as paint colors, window systems, walls, insulation or systems to name only a few. In many instances, this will involve a closer analysis and understanding of

the original design and programmatic intent and construction as well as modern day expectations.

Assignment 4: Handed out November 1– Due: November 29

This assignment intends to look at another aspect of modern architecture preservation: its materials and assemblies. The gradual revolutionizing of the building trade, its materiality and processes, led to many assemblies that – correctly or incorrectly – have been dubbed experimental in the contemporary preservation narrative. A modern material assembly will be explored and studied and where deemed appropriate a conservation method suggested.

Assignment 5: Handed out: November 29 – Due: December 13

The final requirement is a short one and is a revisiting of Assignment 1 done at the beginning of the semester, where five (5) projects were identified as threatened. In this assignment that original list returns with the basic question as to how that list would be modified. The changes can be replacing ones on the list with ones that are more threatened, more significant or where the threat is different from originally envisioned. The justification has to follow the same format, was outlined before.

In addition, a suggestion is to be made as to how a preservation strategy should be approached.

Nicholas Dagen, Fritz Umbach and Lawrence Vale, editors,
Public Housing Myths: Perception, Reality and Social Policy
(Ithaca, NY: Cornell University Press, 2015)

Sigfried Gideon,
Space Time and Architecture
(Cambridge, MA: Harvard University Press, 1941)

Robert Gordon,
The Rise and Fall of American Growth: The US Standard of Living Since 1970
(Chicago, IL: University of Chicago Press, 2015)

Roberta Grignolo and Bruno Reichlin, editors,
Modern Interior Space as an Object of Preservation
(Mendrisio, CH: Academy Press, 2012)

Franz Graf and Francesca Albani, editors,
Glass in the 20th Century Architecture: Preservation and Restoration
(Mendrisio, CH: Academy Press, 2011)

Vladimir Kulić, Timothy Parker and Monica Penick, editors,
Sanctioning Modernism: Architecture and the Making of Postwar Identities
(Austin, TX: University of Texas, 2014)

Mohsen Mustafavi and David Leatherbarrow,
On Weathering: The Life of Buildings in Time
(Cambridge, MA: MIT Press, 1993)

Theodore H. M. Prudon,
Preservation of Modern Architecture
(New York, NY: John Wiley & Sons, 2008)

Bernard Toulier,
Architecture et patrimoine du XX^{ème} siècle en France
(Paris, France: Caisse nationale des monument historiques et des sites, 1999)

Specific readings for the individual sessions will be posted.