

Fall 2004	<b>ARCH 509P Kahn and Venturi</b>
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<b>Credits:</b>	3
<b>Type of Course:</b>	Elective Seminar
<b>Class Meetings:</b>	Wednesdays, 2 pm – 5 pm
<b>Location:</b>	310 HHS
<b>Prerequisites:</b>	ARCH 308
<b>Enrollment Cap.:</b>	20
<b>Instructor:</b>	John Lobell, JLobell@Pratt.edu, 212-679-1935

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### **COURSE OVERVIEW**

The work and philosophies of Louis Kahn and Robert Venturi are presented as a detailed study of two major trends in modern architecture: organic or “integrated” architecture, typical of Wight, Mies, and Corbu and exemplified by Kahn; and “decorated construction,” typical of 19th century eclectics and the post-modernists and exemplified by Venturi. Besides slide-illustrated lectures and reading, there are in-class and take-home drawing assignments.

### **LEARNING OBJECTIVES**

For the architectural student, the study of architectural history and the work of specific architects should be an aid in the mastering of design. Kahn and Venturi are invaluable sources for us as designers.

### **COURSE REQUIREMENTS & GRADING CRITERIA**

- **Attend all classes, take notes, and participate in class discussions**  
(Note: If you miss a class, bring a written excuse the next week and see me after class to review the material you missed)
  - **Exams: Quizzes on reading and a final exam**
  - **Class notes: Notes must be taken in class. Xerox copy must be submitted at end of course.**
  - **Evaluation of Work: Grade will be derived as follows:**
    - **Quizzes on reading: approx 10% each, total 20%**
    - **Final exam: approx 40%**
    - **Paper: approx 30%**
    - **Lecture notes: approx 10%**
- Grades may be lowered for poor attendance and lack of participation.**

### **REQUIRED BOOKS**

*Between Silence and Light*, John Lobell, Shambhala  
*Complexity & Contradiction in Architecture*, Venturi, MoMA

**RECOMMENDED BOOKS**

*Louis I. Kahn: In the Realm of Architecture*, David Bruce Brownlee With David G. De Long. Rizzoli (there is also a condensed edition)

This is the “catalog” of a major Kahn show, and is very comprehensive. It is highly recommended that you own this book. Buy the condensed version if you want to save money.

*Louis Kahn's Situated Modernism*, Sarah Williams Williams Goldhagen. Yale

A major study of modern architecture after WW II. Goldhagen, I think, mostly gets it wrong.

*Louis I. Kahn: Unbuilt Masterworks*, Kent Larson. Monacelli

Computer generated color images of Kahn’s key unbuilt works. Show them to your friends – they will think these are photographs.

*Louis I. Kahn, Writings, lectures, Interviews*, Ed. Latour. Rizzoli

My book, *Between Silence and Light*, is my editing. This gives you what Kahn actually said.

*Louis Kahn, Essential Texts*, Ed. Robert Twombly. Norton

Think of this as a condensed, more affordable version of the above.

*Louis I. Kahn Architect*, Giurgola and Mehta. Westview

One of the most profound books and Kahn and on philosophy of architecture. Long out of print. If you find one online, buy it.

*Learning from Las Vegas: The Forgotten Symbolism of Architectural Form*, Robert Venturi Steven Izenour Denise S. Brown. MIT

Sort of the urban version of Venturi’s *Complexity and Contradiction*, plus essays developing his ideas further.

*Out of the Ordinary: The Architecture and Design of Venturi, Scott Brown and Associates*, David Bruce Brownlee, Kathryn B. Hiesinger, and David de Long. Yale

This is the “catalog” of a major Venturi show, and is very comprehensive. It is highly recommended that you own this book.

*Mother’s House*, Fredric Schwartz. Rizzoli

Great for seeing the development of this building. You will be surprised—it started looking like a building by Kahn.

(See p 8 for more notes on these books.)

**LECTURE NOTES**

The lectures in this course cover major architectural issues in Kahn's and Venturi's work as well as powerful ideas behind the work.

The way we will know if you have comprehended these architectural issues and ideas is if they show up in your notes. They will also be addressed in the final exam.

The way you retain material in a course is by taking notes. While it is difficult to listen to a lecture and take notes at the same time, it is vital to be able to do so. If you do not take notes, chances are you will not retain the material. While I hope my lectures are interesting, they are intended as more than entertainment. The taking of notes and is what makes them more than entertainment. (Yes, you are permitted to record the lectures in any format. However, if you do, you must still take notes during the lectures.)

Notes should not be a verbatim transcript of the lecture, but an organized outline of the key ideas. Of course it is difficult to comprehend the material in a lecture and get it into an organized outline during the lecture, but it is the very act of doing so that gives you mastery of the material and helps it stick in your mind. Doing this makes you an active participant in the lecture, not just a passive listener, and helps you make the material your own. Since this is an architecture course, you should include sketches and diagrams in your notes.

The best way to study is to review your notes shortly after class every week. If you are really serious, you might want to rewrite or type up your notes each week while the lecture is still fresh in your mind. You will of course want to review them again before the final exam.

If this is a good course, and if you have taken good notes and perhaps rewritten them, you will want to keep them, along with notes and other material from most of your courses, indefinitely as part of your personal architectural library.

As in indication that I take this seriously, I want you to turn in a xerox copy of you notes for the entire course on 12/1.

**PAPER****Do a paper on one of these topics:****1. *Louis Kahn and Modernism***

What do we mean by modernism in architecture? How does it relate to modernism in culture? Who are the major proponents/practitioners? How does Kahn's work and/or philosophy fit or not fit into the definition of modernism you have given? Give specific examples of Kahn's work. In discussing modernism, refer to specific architects and specific examples of their work. Refer to *Louis Kahn's Situated Modernism*, Sarah Williams Goldhagen

**2. *Venturi and an American Architecture***

Sullivan and Wright sought to create a uniquely American architecture. The European Modern Movement (the International Style) sought to create an architecture independent of national cultures—a universal architecture. Venturi rejects this idea and is interested in the American context and the specifics of his sites. Discuss why and how an international design was sought, how Venturi's approach differs, if you would consider his an "American Architecture," and if so, why, and if not, why not. If you feel that there is or should be an "American Architecture," but that Venturi misses the mark, explain why. Make reference to specific International style architects and projects, and to specific projects by Venturi. Refer to *Out of the Ordinary: The Architecture and Design of Venturi, Scott Brown and Associates*, David Bruce Brownlee, Kathryn B. Hiesinger, and David de Long.

**3. *Louis Kahn in the light of Recent Architectural Theory***

How would recent architectural theory view Kahn?

Refer to essays in:

*Architecture / Theory / since 1968*, edited by K. Michael Hays  
and/or

*Theorizing A New Agenda for Architecture*, edited by Kate Nesbit

**4. *Robert Venturi in the light of Recent Architectural Theory***

How would recent architectural theory view Kahn?

Refer to essays in:

*Architecture / Theory / since 1968*, edited by K. Michael Hays  
and/or

*Theorizing A New Agenda for Architecture*, edited by Kate Nesbit

**FORMAT (see next page)**

**FORMAT:**

Typed on computer, Times font, 12 pt., 1 1/2 space, ample margins. Use a title page that has the title of your paper one third down, centered, and in the lower right has:

- Your name
- Arch 509P, Kahn and Venturi
- Fall 2004

Do not use a cover of any kind. Just staple your paper with one staple in the upper left corner.

**Length:** Your paper should be between 1,700 and 3,000 words.

References: use the required books for this course plus Curtis (text for ARCH 308). In addition, use at least two other books. You may also use internet sources, but you must give proper attributions as you would with books.

Attributions: Properly attribute all sources with footnotes and a bibliography. Use **Diana Hacker, *Rules for Writers***, Bedford/St. Martin's, 2000 (Fourth Edition) as a guide. This is the Pratt-wide handbook for writing style

**NOTE ON CHEATING AND PLAGIARISM:**

Students are reminded that cheating and plagiarism are not permitted, and can lead to serious consequences.

Pratt Institute holds issues of academic integrity in the highest regard. So do we. Instances of cheating, plagiarism, and misappropriation of intellectual property will not be tolerated and will be handled in the following manner:

- We are required to report the incident to the registrar, and it will be recorded in your file.
- More than one report to the registrar during your entire time at Pratt will result in a hearing before the Academic Integrity Board, at which time appropriate sanctions will be decided. These may include dismissal from the Institute.
- We will determine the nature and severity of the infraction and apply appropriate sanctions that can range from asking you to repeat the assignment, failing you for the assignment, failing you for the course and/or referring the case to the Academic Integrity Board.

For more details about these procedures please see the *Student Handbook*, the Pratt Bulletins, and the *Judicial Procedures at Pratt* pamphlet.

**CHEATING**

If you are using dishonest methods to fulfill course requirements, you are cheating. Examples of this include, but are not limited to:

- Obtaining or offering copies of exams or information about the content of exams in advance.
- Bringing notes in any form to a closed book exam.
- Looking at another student's paper during an exam.
- Receiving or communicating any information from or to another student during an exam.

**PLAGIARISM**

Plagiarism is a bit more complicated, but the rules of documentation and citation are very specific and are tailored to different academic disciplines. Types of plagiarism include:

- Including any material from any source other than yourself in a paper without proper attribution. This includes material from the Internet, books, papers from other students, and from any other source.
- The extensive use of the ideas of others in your paper, even if in your own words, without proper attribution.
- Turning in work as your own that was done by another person.

Please remember that all written work must be in your own words or cited and documented appropriately. If you do not understand how to do this properly, it is your responsibility to ask.

**ARCH 509P: KAHN AND VENTURI: SCHEDULE, FALL 2004**

1. 9/1 Introduction. Books. Philosophical opposition of Kahn and Venturi.  
Kahn and the Beaux-Arts
2. 9/8 Kahn: Early work, Yale Art Gallery,  
Trenton Community Center and Bath House.
3. 9/15 Kahn: Medical Towers, Salk Institute
4. 9/22 Kahn: Film on Kahn
5. 9/29 Kahn: Philosophy  
• **QUIZ:** *Between Silence and Light*
6. 10/6 Kahn: Banglanagar, Indian Institute of Management,  
Exeter Library, Kimble Museum, Yale British Studies Center
7. 10/13 Kahn: Kahn and Modernism  
• **QUIZ:** *Louis I. Kahn: Building As Philosophy* (attached to this outline)
8. 10/20 Venturi: Venturi's challenge to modern architecture  
• **QUIZ:** *Complexity and Contradiction*
9. 10/27 Venturi: Pearson, Duke, Beach House, Visiting Nurse's,  
Grand's, Guild House, Mother's House  
• **FIRST DRAFT OF PAPER DUE.** Be prepared to discuss your paper  
with the class
10. 11/3 Venturi: FDR, Copley Square, Football Hall of Fame, Las Vegas,  
The Duck and the Decorated Shed, Signs
11. 11/10 Venturi: The Ghost House, Neo Grec, Steve's Father's House, Furniture,  
National Gallery
12. 11/17 Venturi: Signs of Life, the American house, Staten Island Ferry Terminal,  
recent projects. Issues Between Kahn and Venturi  
• **QUIZ:** *K&V, An Architecture of Being-in-Context*, (attached to this outline)  
• **PAPER DUE.** Be prepared to discuss your paper with the class
- 11/24 No class, thanksgiving
13. 12/1 **FINAL EXAM**  
• **COURSE NOTES DUE**
- 12/8 *No class. Jury week*
14. 12/15 Discussion

### Notes on Books from bn.com

**Louis I. Kahn: In the Realm of Architecture**  
David Bruce Brownlee With David G. De Long  
 Designed by Elizabeth A. Smith

**Publisher:** Rizzoli International

This catalog of a traveling exhibition of Kahn's architecture includes an account of its subject's career. "Studies of the development of 19 of Kahn's major buildings follow, written by various specialists, with an account of the Kahn Collection, housed at the University of Pennsylvania, by Julia Moore Converse, its curator, who joined the principal authors in creating the exhibition." (N Y Times Book Rev) Annotated bibliography Index

Architect Louis Kahn discovered late in life how to transform the ruins of ancient Rome into modern buildings. His pursuit of an ideal geometric order was informed by a keen sense of history. Based on platonic shapes, his buildings, at once monumental and human in scale, marked the end of the international style and opened the way for a revival of vernacular and classical traditions. These themes are documented in a lavishly illustrated retrospective survey which accompanies a traveling exhibition. Brownlee, associate professor of art history, and DeLong, professor of architecture, both at the University of Pennsylvania, track Kahn's prodigious career in intimate essays followed by a 160-page pictorial section analyzing 14 key projects. Simultaneously Rizzoli is also publishing *Louis I. Kahn: Writings, Lectures, Interviews*, edited by Alessandra Latour, which includes Kahn's essays, philosophical meditations and free-verse poems, and *The Paintings and Sketches of Louis I. Kahn*, by Jan Hochstim (see review above). (Dec.)

#### **From William H. Jordy - The New York Times Book Review**

The book is lavishly but discreetly designed, weighty by reason of bulk and content, and well conceived. The long introductory section by the authors complements the exhibition by providing the first comprehensive account of Kahn's career. It is at once authoritative in scholarship, perceptive in criticism and so

gracefully and clearly written that the general public as well as scholars will learn from it. . . . {There} is a stunning portfolio of color plates of Kahn's buildings, most of them newly taken by Grant Mudford. This volume will serve as the basis for future studies of Kahn.

#### **Louis Kahn's Situated Modernism**

Sarah Williams Williams Goldhagen Louis I. Kahn

**Publisher:** Yale University Press

"Louis Kahn is perhaps the most important architect to emerge in the decades following World War II. In this book Sarah Williams Goldhagen dismantles the myths that have cast Kahn variously as a mystical neo-Platonist, a structural rationalist, a visionary champion of Beaux-Arts principles, or a rebel against modernism. She demonstrates instead that Kahn's architecture is grounded in his deeply held modernist political, social, and artistic ideals, which guided him as he sought to rework modernism into a socially transformative architecture appropriate for the postwar world." "Goldhagen presents much new archival evidence about Kahn's buildings, his ideas, and his indebtedness to contemporary art and to the many socio-critical and architectural discourses of the postwar years. She offers fresh interpretations of many of his important buildings, including the Yale University Art Gallery and the National Assembly complex in Bangladesh, as well as of such previously understudied or misunderstood works as the Trenton Bathhouse and his AFL Medical Services building in Philadelphia. Goldhagen then theorizes Kahn's architectural principles to show that he struggled with modernism rather than against it, reconceptualizing it into a singular and powerful new vocabulary that retains architectural and social relevance today." -BOOK JACKET.

**Louis I. Kahn: Unbuilt Masterworks**

Kent Larson William J. Mitchell (Afterword)  
Vincent J. Scully (Introduction)

**Publisher:** Monacelli Press, Incorporated  
**From the Publisher**

Author Kent Larson has delved into Kahn's extensive archives to construct faithful computer models of a series of proposals the architect was not able to build: the U.S. Consulate in Luanda, Angola; the Meeting House of the Salk Institute in La Jolla; the Mikveh Israel Synagogue in Philadelphia; the Memorial to Six Million Jewish Martyrs in New York City; three proposals for the Hurva Synagogue in Jerusalem; and the Palazzo dei Congressi in Venice. The resulting computer-generated images present striking views of "real" buildings in "real" sites."

"Complementing the new computer images is extensive archival material - rough preliminary drawings, finely delineated plans, and beautiful travel sketches. Larson also presents documentation of each project, often including correspondence with the clients that shows not only the deep respect accorded the architect but the complicated circumstances that sometimes made it impossible to bring a design to fruition. Not only a historical study of Kahn's unbuilt works, this volume is in itself an intriguing alternative history of architecture.

**From the Critics**

**From Library Journal**

Since the early 1990s, Larson, an architect and director of MIT's Digital Design Lab, has been a pioneer of computer-generated imaging as well as a trailblazer in the field of "smart house" design. This well-illustrated volume showcases his digital realizations of eight significant but never built projects by Louis Kahn (1901-74), one of the 20th century's most brilliant and original architects. Using highly advanced software, "photographs" depicting interior and exterior views have been painstakingly crafted to convey an uncanny sense of space and natural illumination. Truly, it seems that the line separating the virtual from the actual has been effaced in these remarkable illustrations. The text touches on the mechanics of the imaging process but falls short of placing Kahn in the context of the architecture of the time. Recommended for academic and large public libraries for its insight into the thought processes of a great builder, this is also

appropriate for technology and design collections as representing the latest in digital rendering.--David Solt sz, Cuyahoga Cty.

**Louis I. Kahn:** The Idea of Order  
Klaus-Peter Gast Foreword by Anne Griswold Tyng

**Publisher:** Birkhauser Verlag  
This comprehensive and innovative study presents the fundamental features of Louis I. Kahn's architecture, and describes his key buildings. It is based on drawings prepared specially for this book, and on unpublished photographs.

**Louis Kahn**

Joseph Rykwert Roberto Schezen  
(Photographer)

**Publisher:** Birkhauser Verlag  
The publication of this book coincides with the centenary of the birth of American architect Louis Kahn (1901-1974), though its immediate occasion is the new collection of photographs that illustrate the text and provide an opportunity to reconsider Kahn's achievement and his way of working. Architectural historian Joseph Rykwert has written a sensitive appreciation of Kahn's career and oeuvre, and photographer Roberto Schezen traveled the world to photograph fifteen of Kahn's major projects especially for this volume. Supplementing the photographs are dozens of Kahn's sketches and plans for many of his built and unbuilt designs.

**From the Critics**

**From Publisher's Weekly - Publishers Weekly**

The architect of Yale University's clean-cut Center for British Art, the graceful Kimbell Art Museum in Fort Worth, Texas, the striking Indian Institute of Management in Ahmadabad, India, and the diamond-shaped Erdmann Hall at Bryn Mawr College receives elegant tribute in Louis Kahn by Joseph Rykwert, professor emeritus of architecture at the University of Pennsylvania, with photographs by Roberto Schezen. (The writer and photographer also teamed up for The Villa: From Ancient to Modern.). After situating Kahn within the post-WWII modern social, artistic and critical framework associated with Lewis Mumford, Rykwert

turns his attention to 15 specific projects, each of which is featured in about a dozen pages of images accompanied by brief text. Architects and scholars will rejoice in this learned, high-quality, large-format book. 185 illus., 100 in full color. ( Nov.) Copyright 2001 Cahners Business Information.

**The Yale Center for British Art: A Tribute to the Genius of Louis I. Kahn**

Duncan Robinson Louis Kahn

**Our Price: \$18.95**

**Format:** Paperback, 80pp.

**ISBN:** 0300069723

**Publisher:** Yale University Press

**Pub. Date:** August 1997

**From the Publisher**

With the accomplished photographer David Finn at his side, Robinson presents the building to us inside and out - from its formal welcoming atrium to the armchair comfort of its galleries, to the serene and well-ordered offices and study spaces - as a successful, living museum. Along the way on this very personal guided tour, he enlightens us as only he could on the history of the museum, on the experience of viewing this particular art collection in its setting, and on a host of architectural and decorative details, from carpets and door-knobs to vaulted skylights. Throughout he draws our attention to the dual nature of the Center as both a public museum and a research institute, a concept well understood and beautifully articulated in Kahn's organization of the building around two interior courts. The Yale Center for British Art is a building that works equally well for research scholars, for third-graders on their first visit to a museum, and for seasoned art lovers. No more and no less than any great building, Robinson and Finn show us, the Center is a work of art in its own right.

**Construction of the Kimbell Art Museum**

Luca I. Kahn (Editor) Joseph Rykwert

**Publisher:** Skira

This publication on the construction of the Kimbell Art Museum by Louis I. Kahn may prove very useful to students, and to anyone interested in gaining further knowledge of the distinctive features of the Kimbell museum. It documents the long and arduous quest that

often characterizes a creative process - even that of a great master such as Louis I. Kahn. The design of the Kimbell Art Museum is the product of extraordinary intuition, and results in a masterly synthesis that solves all the problems posed by the site and the specific purpose of the construction.

**VENTURI**

**Learning from Las Vegas: The Forgotten Symbolism of Architectural Form**

Robert Venturi Steven Izenour Denise S. Brown

**Publisher:** MIT Press

**From the Publisher**

"Their insight and analysis, reasoned back through the history of style and symbolism and forward to the recognition of a new kind of building that responds directly to speed, mobility, the superhighway and changing life styles, is the kind of art history and theory that is rarely produced. The rapid evolution of modern architecture from Le Corbusier to Brazil to Miami to the roadside motel in a brief 40-year span, with all the behavioral esthetics involved, is something neither architect nor historian has deigned to notice...."

-- **Ada Louise Huxtable**, *The New York Times*

*Learning from Las Vegas* created a healthy controversy on its appearance in 1972, calling for architects to be more receptive to the tastes and values of "common" people and less immodest in their erections of "heroic," self-aggrandizing monuments.

This revision includes the full texts of Part I of the original, on the Las Vegas strip, and Part II, "Ugly and Ordinary Architecture, or the Decorated Shed," a generalization from the findings of the first part on symbolism in architecture and the iconography of urban sprawl. (The final part of the first edition, on the architectural work of the firm Venturi and Rauch, is not included in the revision.) The new paperback edition has a smaller format, fewer pictures, and a considerably lower price than the original. There are an added preface by Scott Brown and a bibliography of writings by the members of Venturi and Rauch and about the firm's work.

**Out of the Ordinary:** The Architecture and Design of Venturi, Scott Brown and Associates

David Bruce Brownlee Kathryn B. Hiesinger  
David de Long

**Publisher:** Yale University Press

**Description from The Reader's Catalog**

The first critical retrospective of the work of this highly influential architectural firm known for their successful urban revitalization projects, including Washington Avenue in Miami and South Street in Philadelphia. With 100 black-and-white and 200 color illustrations

**From the Publisher**

This engaging book presents the first critical retrospective look at the extraordinary architectural achievement of Robert Venturi, Denise Scott Brown, and their firm. Known for such prominent buildings as the Sainsbury Wing at the National Gallery in London and the Seattle Art Museum as well as such major urban revitalization plans as Washington Avenue in Miami and South Street in Philadelphia, Venturi, Scott Brown and Associates changed the face of architectural history.

This husband and wife team rejected the universality of modernist design for a particularized contextual and associational approach to building, lauding the "complexity and contradictions" in the historic cityscape and "learning from Las Vegas" the value and vitality of the everyday environment.

The book, which combines both biography and critical analysis, includes essays on the firm's early and later architectural works and on their lesser-known decorative arts. It also features handsome color plates of the firm's buildings, architectural drawings, and furniture and other decorative arts, as well as a checklist of all their buildings and projects.

The catalogue accompanies a major exhibition that opens at the Philadelphia Museum of Art

in June of 2001 and then travels to the Museum of Contemporary Art in La Jolla, California; and the Heinz Architectural Center in Pittsburgh, Pennsylvania.

**From the Critics**

**From Stanley Abercrombie - Interior Design**

[A] readable and valuable account of Venturi and Scott Brown's separate and then united adventures in architecture and urban design.

**From Library Journal**

This is the catalog for an exhibition originating at the Philadelphia Museum of Art and traveling to the Museum of Contemporary Art in La Jolla, CA, and the Heinz Architectural Center in Pittsburgh. Brownlee (art history, Univ. of Pennsylvania), David De Long (architecture, Univ. of Pennsylvania), and Kathryn B. Hiesinger (curator of European decorative arts, Philadelphia Museum of Arts) discuss the the accomplishments of Venturi, Scott Brown, & Associates (originally Venturi, Rauch, and Scott Brown), as well as relevant decorative arts, along with drawings and color plates. Two of the most valuable sections are the chronology and the project list, which includes 400 projects designed by "Robert Venturi, Denise Scott Brown, and their associates" (sorry, Rauch) between 1957 and 2000.

Unfortunately, as is typical of many exhibition catalogs, the text is too big and the pictures are too small. In addition, the book is extravagant in tone, claiming, for instance, that the Trubek and Wislocki Houses are "two of the most distinctive buildings of the twentieth century." However, because it documents a major architectural firm, this book must be recommended for all architectural collections. Two books by Stanislaus Von Moos Venturi, Rauch, and Scott Brown: Buildings and Projects (o.p.) and Venturi, Scott Brown & Associates: Buildings and Projects, 1986-1998 (LJ 2/15/00) provide better pictures and a less indulgent text. Jay Schafer, Univ. of Massachusetts, Amherst Copyright 2001 Cahners Business Information.

## "Both-And" A New Architectural Concept

Also available at

<http://johnlobell.com/publications/BothAnd.htm>

By John Lobell, Arts Magazine, February 1968

In *Complexity and Contradiction in Architecture* the first in a series published by the Museum of Modern Art, Robert Venturi adds to the controversies which surround him. Already hostile to many aspects of his work, the architectural establishment is now expressing hostility to his theories. While, on the surface, a theory which calls for complexity, contradiction, and perversity in architecture may seem arbitrary and capricious, a serious reading of his book will reveal an approach to art and architecture which is more valid than any suggested by Venturi's critics.

One of the criticisms against Venturi is that his concern with specific problems of activities and experience at small scales (such as that of the residence) ignores the magnitude of contemporary urban problems which require technical and political solutions. While it is true that the coming problems of architecture will require reformation of the architectural profession and of building industries, the basic questions of qualities of experience remain, and new solutions will not be satisfactory if they do not consider these experiential questions.

Fundamentally the difference between Venturi and the "orthodox" modern architects may be expressed in one question: "Should a work of architecture, as a work of art, fulfill the expectations which it arouses or not fulfill the expectations which I arouses? The orthodox answer is that it should; Venturi's answer is that it should not.

The orthodox approach to modern architecture can be understood in terms of Kenneth Burke's "theory of classical form" which states that art arouses and then fulfills expectations. (Burke's theory is developed for theater, but is expanded to include the other arts and human motivation in general.) In the *Tulane Drama Review* for the summer of 1966, Burke writes that "classical form" can be reduced to three principles: progressive, repetitive, and conventional.

"Progressive form was said to involve the use of situations which led the audience to anticipate or desire certain developments. 'Repetitive' form involves the ways in which a work embodies a fixed character or identity, the ways in which a work, however disjunct, manifests some kinds of internal self-consistency. 'Conventional' form (or 'categorical expectancy') involves the kinds of expectation which an audience brings to the theater as an established institution." (p. 54.)

It is not difficult to imagine how these categories could be applied to a series of examples of orthodox modern architecture in defense of a theory of "simplicity and consistency" in architecture. However, it is also apparent that these categories could be listed with the provision that each of the different kinds of anticipation should not be fulfilled. In *Man's Rage for Chaos*, Morse Peckham gives a similar list of categories with the provision that the anticipation should not be fulfilled and calls them "discontinuities". In Peckham's theory "discontinuities" are a defining characteristic of art.

Art can be satisfactorily described only when it is understood not to fulfill the expectations which it arouses. Since Venturi must ultimately be understood in terms of the nature of art, it is necessary to establish a theoretical foundation before further analyzing complexity and contradiction in architecture.

Architecture cannot be understood as art until art has been understood in general. A major problem in theories of art has been a supposedly necessary relationship between the work of art and the experience of art. From the resolution of this problem a theory of art can be developed.

There is no "ideal world" in which a class of "art objects" can exist. Any attempt to identify art as a class of objects exhibiting some ideal characteristics is bound to failure, both by inner inconsistencies and by an inability to explain basic characteristics of art. Barring a definition of art in terms of objects, it will be defined as a "perceptual field in which one has the art experience." (Morse Peckham). The definition of art will be given meaning by the definition of the art experience.

Our experience is created out of a "dialogue" between ourselves and a world dependent on our subjectivity. In this dialogue our subjectivity is decisive in determining our reality. Since our subjectivity is determined by our perception, and our perception is variable (due to culture, technology, and other factors) reality varies with perception. However, as human beings we are not comfortable with this prospect of change; we develop numerous devices to maintain a static existence in the illusion of an unchanging reality and to hide the existence of the dialogue from ourselves.

While it may seem that people can get along believing that their reality is absolute, universal and unchanging, ultimately they cannot. Sooner or later the reality believed in will prove inadequate to comprehend daily situations. An awareness that a particular situation is in actuality a creation of the

dialogue can lead to a more profound understanding of that situation. An awareness that reality in general is a product of the dialogue can lead to an existence which avoids the distortions and impasses which would otherwise eventually come about. With this awareness experience is freed to become a source of meaning.

The defining characteristic of the art experience is that in it one is aware of the dialogue. There are situations in which people feel sufficiently protected to open themselves to "discontinuities," experiences in high expectations are aroused and not fulfilled. Through training we tend to be able to have such experiences in libraries, concert halls, galleries, etc. Such an experience functions both to maintain an awareness in the individual that his reality is not absolute, and to educate him toward a more appropriate reality during time of cultural change.

Thus when we encounter a particular perceptual field we bring to it our personal and cultural anticipations. These anticipations will have been formed in the past, partially during previous encounters with similar perceptual fields. The person who arranges a particular perceptual field may become aware that changes in the culture have made a new and more contemporary experience of the perceptual field possible. He arranges it in such a way as to extend the limits of an individual's experience of it to fit the possibilities created by the changes in the culture. We approach this product with outmoded perceptual anticipation and find that these anticipations are not fulfilled. We experience a discontinuity. We then must alter our anticipations and reconstruct our reality. In so doing we are aware of the dialogue, and we advance our experience towards one which is more responsive to the contemporary situation. When we have such an experience, the perceptual field in which we have it is a work of art. The person who arranges it is an artist.

Architecture, in its function as an art, creates discontinuities in a broad range of activities. It should not always fulfill the expectations which it arouses, and is by its nature complex and contradictory.

Complex and contradictory architecture does not imply arbitrary or picturesque architecture. Discontinuities will only be recognized in a context where anticipations are usually fulfilled and those that are not fulfilled are meaningful. There must be a consistency among the discontinuities which an artist creates, and they must work towards a unified concept of the structure of reality.

Venturi's book is primarily an approach for understanding discontinuities in architecture. His

classifications include contradiction juxtaposed, ambiguity, "both-and," and inflection. The function of discontinuity and its creation out of ambiguity, is evident throughout Venturi's classification of complexity and contradiction. Meanings are derived from conventional elements through their use in conventional ways. Venturi writes:

The architect's main work is the organization of a unique whole through conventional parts and the judicious introduction of new parts when the old won't do. Gestalt psychology maintains that context contributes meaning to a part and change in context causes change in meaning. The architect thereby, through the organization of parts, creates meaningful context for them within the whole. Through unconventional organization of conventional parts he is able to create new meanings within the whole. (pp. 49-50.)

Representative of Venturi's categories in his concept of "both-and". He writes:

I prefer 'both-and' to 'either-or,' black and white, and sometimes gray, to black or white. A valid architecture evokes many levels of meaning and combinations of focus; its space and its elements become readable and workable in several ways at once. (p. 23.)

He sees "orthodox modern architecture" as characterized by "either-or," where, for example, a support is seldom an enclosure. The examples that he presents of both-and in architecture include the ceilings of Sir John Soane's secular chambers which are "both rectangular and curvilinear, and domed and vaulted." (p. 36.) Also referred to is pre-cast concrete construction which can be continuous yet fragmentary, flowing in profile yet surfaced with joints." (pp. 36-37.)

After analyzing hundreds of examples by fragmentation, Venturi deals with the problem of the whole, thus completing an original contribution to architectural theory.

Architecture is now becoming involved with large and comprehensive projects. If these projects are approached with no theoretical considerations, or with considerations based on technology alone, they will not create a more tolerable environment, no matter how inclusive their scale. Venturi's writing suggests an approach founded in the nature of experience. From such an approach can come a vision of the context of man as clear and meaningful for our time as the Uffizi was for its time. Without such an approach an arbitrary and hostile environment will be perpetuated.

## **Kahn and Venturi An Architecture of Being-in-Context**

By John Lobell

Also at  
<http://johnlobell.com/publications/Art-Kahn&Venturi.htm>

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I prefer "both-and" to "either-or"; "black-and-white-and-sometimes-gray," to black or white.

- Robert Venturi

Both Louis Kahn and Robert Venturi have reacted to orthodox modern architecture. As different as they are, they complement one another in restoring two vital qualities of experience that were expurgated by the modern movement, Being and context. Kahn was concerned with the eternal qualities of Being (and with human being). He sought essences in buildings, that is, their fundamental natures, their origins beyond the merely circumstantial. Kahn typically asked such questions as: "What is a school?" On the other hand, Venturi (and his firm, Venturi and Rauch) is concerned with context. He would probably assert that there are no essences, that the human being is a historical creature existing in historical, locational and personal contexts. Venturi would maintain that reality is circumstantial, and he would be much more concerned with this school for this client in this time and place. Despite their seeming incompatibilities, Kahn's and Venturi's positions can be taken together as the basis for a meaningful architecture rooted in Being-in-context.

There is now a widespread recognition of what is termed "the failure of modern architecture." Critics point out that "functionalism is a style rather than a reality, and that, and that besides frequently not working in simple functional terms, modern buildings are often sterile, hostile and unresponsive to their setting. Furthermore, they use styles, materials, and techniques of construction which are applied universally and which are therefore often inappropriate for local conditions. It is also pointed out that modern architecture has abandoned "language"; the same building form may be used for a chapel, a school, a museum, or a convention center--as Mies van der Rohe in fact did do. In sum, our buildings are alienating to us and are themselves

alienated from the human, and even technological, realities of our world.

The limits of functionalism have long been recognized, but the response has often been to reintroduce an esthetic skin on functional building. Recent critics of modern architecture, especially Charles Moore, Charles Jencks, and Robert Stern, argue for an eclectic "post-modern" alternative.

The troubles in modern architecture have not gone unnoticed by those who would take over. Sociologists and behavioral psychologists have developed a field called "environmental psychology," which seeks to understand and alleviate environmental problems, in effect by intensively applying the rationalism and scientism which caused them in the first place. This approach sidesteps fundamental issues in architecture, namely issues of meaning, in the name of objectivity. Within architecture "design systems methodologists" pursue a similar approach. Neither group has produced particularly successful projects.

Rationalism in the modern movement is seen in De Stijl, the Bauhaus, early Le Corbusier, and the International Style. De Stijl commentators went so far as to suggest that art surrender its transformative quality and that artists throw themselves into the hands of sanitary engineers who, they said, are the true interpreters of our place in nature. The rationalization of architecture is best seen in Bauhaus education as developed in Germany and later adopted in many American schools in the 1940s and 1950s. Famous in this curriculum was the basic design course which was common to various art and design students, including architects. This commonness was important, as it made architecture a form of industrial design, and therefore of culture-free problem solving. Rather than studying building elements and the classical orders, the student was directed back to the "basic" elements of composition: form, texture and color. Later, when the student moved on to building design, instructors made it clear that the project (a house, for example) was not to reflect the student's own home, as that was probably "middle class"; it was not to reflect history, as that was revivalism; and it was not to reflect other houses in the neighborhood, as that would compromise new universal principles. Grasping for a source of form (since the program itself did not provide them, despite the claims of the functionalists) the student had only the textures, graphic compositions, gray

scales, and color patterns of basic design to fall back on. Thus the resulting building was cut off from personal, historical, and locational context, and everybody wondered why it was alienating.

The Bauhaus method of designing from a program contrasted with the Beaux-Arts method of designing from prototypes which came down through history and had intangibles built into them. The limitation there was that the Beaux Arts had frozen the prototypes. The "program" was most important in Bauhaus education. An ideal "functionalist" solution reflects nothing more or less than the requirements of the program--that list of functions, spaces, square footage, and necessary relationships. All intangibles and all undiscovered important issues are omitted. For example, a recently discussed issue (and current fashion) is "defensible space": now presumably all previous buildings are undefendable. Other important intangibles include, for instance, such cultural issues as the human place in nature.

Behind the program of rationalism and anticontextualism in functionalist architecture was a belief that architecture could be freed from restrictions and limitations of the past and break out into a future of pure noncontextual significance, a future in which all architecture would at last be based on subjective (personal), transitory (historical), and local (locational) meanings, but on universal and immutable meanings. Like science, whose success modern architecture (and other arts and social disciplines) sought to emulate, architecture would be founded on the laws of nature, human perception, and the mind's logic. With these tools the International Style could claim not to be just another style, but to be the end of all style and the beginning of a true scientific architecture.

The problem with the vision of a completely rational and scientific architecture is, of course, that it is impossible. The physical sciences which the architects sought to emulate are themselves not "objective," but are, as Kuhn and others have shown, quite culture-bound. Perception--which the behaviorists cite as the blank reception of data from the world--has repeatedly been shown by phenomenologists, and more recently by the American "new-look" psychologists, to be prestructured by consciousness. Godel and others have shown that no exact language can describe the world without contradiction. In other words, the world simply does not consist of the kind of

order used in mathematics or logic. These disciplines can make descriptions which approximate the world, but they are fundamentally and inherently unable fully to describe it.

Rational logic is a language of consciousness, not of nature, and our preoccupation with it has cut us off from rootedness in nature, or, to use Heidegger's term, from Being. For Heidegger, science and technology bring a darkening of the world in which we become more concerned with gadgets, from genes to space ships, than with our true calling as the shepherds and watchers of being. So we are lost--as is Being itself, which in Nietzsche's term has become a "haze." Now a rejection of rationalism need not imply mysticism or the absurd. There are other forms of order besides rationalism. Of particular interest here are the investigations of Lao Tzu and Heidegger, which are remarkably similar to those of Louis Kahn.

Kahn's approach to architecture was very different from the rationalism of modern architecture. Kahn sought the eternal in things, which could be found only in their origins. For him the fundamental question was: how does that which is not yet come into being? His explorations of this question were in the form of poetry.

"Silence, the immeasurable, desire to be, desire to express, the source of new need, meets Light, the measurable, giver of all presence, the measure of things already made, at a threshold which is inspiration, the sanctuary of art, the Treasury of Shadow."

I said that all material in nature, the mountains and the streams and the air and we are made of light which has been spent, and this crumpled mass called material casts a shadow, and the shadow belongs to Light.

Here Kahn's metaphor, from Silence to Light to the material world, is similar to Lao Tzu's:

"The unnamed is the mother of the named,

The named is the mother of the Ten Thousand Things."

It is also similar to Heidegger's, which sees Being as depending on the fertile ground of non-being.

Kahn terms the way whereby things come from silence into light "order." To find the essential

nature of a thing was to find its order, for which knowledge is of limited use. Rather intuition is to be used, intuition containing the record of our own coming into being. Intuition gives access to the transition from Silence to Light, which is a threshold where art is the appropriate language. Therefore art is our true language and our true calling is as the shepherds for Order ("order" is Kahn's term; "Being" is Heidegger's). Things come into being as Light, and the material world is Light that has spent itself.

Kahn said that expressing our nature is essential to human beings. Desire is the avenue of expression, and there are three great desires: the desire to learn, the desire to meet together, and the desire for well-being. All institutions grow out of the common agreement for these desires, and institutions can be kept vital only by being in touch with their origins in the common agreement. Architecture is for institutions and serves the common agreement. During the 1960s our institutions came under attack. Many architects were disillusioned enough to drop out, or else joined in the attacks on behalf of radical political action for reform. In both cases it was felt that meaningful architecture, per se, was no longer possible. Kahn was sensitive to these views but shared neither of them. He was too optimistic to drop out and too realistic to believe that radical political action would bring about a utopia in which architecture would again be meaningful. Rather, he practiced his art on a level above his skeptical times and continually tried to go back to beginnings--to find out what the original essence of education was before designing a school, for example. Only by such a search for beginnings, he felt, could we kindle the spark of vitality in our institutions, which would be absolutely necessary for architecture to have meaning. Other architects have sought to build pure form outside of any understanding of, or belief in, institutions. For Kahn such an approach was meaningless.

Architecture serves institutions but is built with materials, and Kahn was intensely concerned with the order of materials.

"In consultation with nature you will discover the order of water, the order of wind, the order of light, the order of certain materials. If you think of brick and you're consulting the orders, you consider the nature of brick, you say to brick: "What do you want, brick?" Brick says to you: "I like an arch." If you say to brick: "Arches are expensive, and I can use a concrete lintel over an opening, what do you think of that, brick?" Brick says, "I like an arch.""

Kahn's response to the program he was given by a client was to change it. The program could never tell him the building's essential nature. Nor could the Beaux-Arts prototype. Instead Kahn would start with the question: "What does this building want to be?" Kahn called the answer to this question, which would come through intuition by the processes described above, the "form." The "form" was the essential nature of the building, from which he would work toward the "design." Of designing a chapel Kahn said:

"First you have a sanctuary, and the sanctuary is for those who want to kneel. Around this sanctuary is an ambulatory for those who are not sure but want to be near. Outside is a court for those who want to feel the presence of the chapel. And the court has a wall. Those who pass the wall can just wink at it."

The form could be stated verbally as above, or diagrammatically. Once it was known, meaningful design could begin.

Kahn's approach is foreign to most Western thought, and his statements are often dismissed, at worst as self-indulgent metaphysics or at best as interesting but irrelevant poetry. But Kahn was not originally a facile designer, as his early work shows, and it was not until his philosophical ideas began to mature and become a part of his architecture that his work came to flower. Then he produced, one after another, some of the most important works of architecture in the 20th century. The importance of Kahn's philosophy is confirmed not only in the success of his architecture, but also in its strong parallels to Heidegger, who represents one culmination in Western thought as well as the reestablishing of footings in pre-Socratic experience and a linking with the East.

Most architects throughout history have probably not started with analysis of Being, because throughout history most architects were born into a culture which provided that analysis. But Kahn found himself in a period dominated by behaviorists and materialists, where there is little concern for the transformative experience in art, and where philosophy has been rendered sterile by the analysts. Kahn was forced to make the entire investigation himself, beginning, as he liked to say, with volume zero. For Kahn, architecture meant bringing an unmeasurable realization from silence into light, using the measurable (the material building) in such a way that others could have access back to he

realization. Thus the purpose of architecture is not social reform. Rather it is the enrichment of the world by reestablishing its access back into its origins. This is of course a spiritual vision and Kahn can be seen in a spiritual light. Although such an interpretation is not common, it is certainly justified by his writing, and also, I believe, by his buildings.

Kahn's design for the Salk Institute for Biological Studies, in La Jolla, California, 1959-65, is in some ways a repetition of the organization of his earlier Richards Research Building, in Philadelphia, 1957-64, with its separation of served and service spaces. However, the Salk Institute introduces new elements into Kahn's work. Here the building not only responds to the stated requirements of the program, but also seeks to respond to the whole human being. Working from the outside in like a mandala, the building represents body, mind, society and spirit. The stair and toilet towers on the outside serve the body. The laboratory spaces where work is done serve the mind. The walkways and stairs providing entrance to the laboratories are places for people to meet and serve society. The tower studies, which allow the fellows to contemplate their work or the ocean in solitude, and the courtyard between the two halves of the building serve the spirit. The courtyard is a "sanctuary" open to the sky, a place for quiet, a place without any purpose but to place on in touch with Being.

The plans for the Salk Institute originally called for a Meeting House. Here Kahn repeated the court of the laboratory as a large central room which would have no stated function. It was meant to serve Kahn's idea of Silence--that which does not yet exist--and to evoke activities beyond those which could be described in any program. In the Yale Center for British Art and Studies, new Haven, 1969-74, the silence of the central room of the Salk Meeting House was realized. Here it is a three-story skylit space which is good for hanging large paintings, but which actually has no programmatic justification. Rather it is a potential, designed to evoke activities which cannot be predicted.

If the courts of the Salk laboratories, the Salk Meeting House, and the Yale Center for British Art and Studies are Kahn's expression in building of Silence, then his expression of material as Light that has spent itself is in the Kimbell Art Museum, in Fort Worth, Texas, 1966-72. Here he used a series of barrel vaults with skylights down their centers. The light is

reflected off diffusers onto the vaults, making the exposed, poured-in-place concrete luminous.

Kahn's designs are very much present in the real world. In some cases they represent the most advanced state of the art in precast and poured-in-place post-tensioned concrete, three-dimensional space frames, suspension, systems, mechanical systems, and laboratory design. He was sensitive to appropriate technologies, using post-tensioned concrete in the United States, but bricks in capitally poor but labor-rich India and Pakistan. Yet despite this, and perhaps because of his search for eternal beginnings, there is a sense in which his buildings transcend place and time. Kahn overcame the lack of resolution of the 1960s by addressing eternal issues in Being. But there are perhaps limitations to such stance. Ultimately, eternal human qualities are manifest contextually, and to supplement Kahn's analysis of Being with an analysis of context we must turn to Venturi.

Robert Venturi is not interested in Being, but rather in meaning, which he generates in his architecture by the placement of his buildings in context. The human being is naturally a contextual animal, and any valid architecture must refer to personal, historical, and locational context. Venturi established the theoretical basis for contextualism in his first book, *Complexity and Contradiction in Architecture* (1966), in which he showed that the art of architecture lies in the subtle play between what is anticipated and what is perceived (hence "Contradiction"). This approach implies that a new work too similar to that of the past does not carry us forward, while one too different does not register. Such processes can take place only in context.

Venturi's approach is best illustrated in his early and seminal house for Mrs. Robert Venturi (his mother) in Chestnut Hill, Pennsylvania, 1962-64 (by Venturi and Short). Here a personal context is established by the relationship to our parents' house as we first conceived it as children. Kahn had spoken of "the house as any child would draw it," and indeed Venturi's house has every element of that archetypal personal house, including a tree--which he symbolizes, as a child might, with a giant sunflower. It is also interesting to note that these same elements (sloped roof, chimney, window with panes, door) are precisely the elements eliminated by Le Corbusier in the Villa Savoie, 1929-31.

A historical context also comes into play in Venturi's design. The house for his mother

goes back to a whole cluster of roots of modern architecture: to the earliest work by Le Corbusier, which is seldom published; to Frank Lloyd Wright before he developed the Prairie Style; and especially to the American Shingle Style houses of New England--particularly the W. G. Low House in Bristol, R.I., 1887, by McKim, Mead and White. Thus Venturi related his mother's house to the American tradition and to the mainstream of early modern architecture, as well as to one of the innovative periods in the history of houses.

Moreover, locational context comes into play in Venturi's acknowledgment of typical suburban houses with their sloped roofs, chimneys, etc., as they in fact exist in the neighborhood of his mother's house. Venturi derives the images in his architecture from architecture (pitched roofs, chimneys, etc.) rather than from "basic design" (abstract textures, gray scales, etc.). While modern architects often make their buildings look like anything but buildings (houses, churches and hot dog stands as hyperbolic paraboloids) Venturi makes his buildings look like buildings.

Modern city planning, developing parallel to modern architecture, had also divorced itself from the realities of urban experience. Historic buildings were destroyed, small towns were ignored; the automobile was never realistically dealt with, visual vitality was replaced with sterile store fronts and the Helvetica Medium typeface in lettering; the street as a social institution was destroyed; and meanwhile zoning by use assured both the need for commuting and the desolateness of downtown areas at night. Venturi, Denise Scott Brown (a partner in the firm Venturi and Rauch) and their colleagues were among the first to take the automobile seriously in terms of its impact on urban scale and in light of the visual experience of the driver. They were also among the first to deal with graphics as a developed part of commercial enterprise with a long history; to deal with high-rise housing in terms of its impact on street scale; to deal with the American vernacular commercial landscape; or to analyze American houses from an "anthropological" point of view. In short, they were among the first to relate architecture to urban, suburban, and rural reality.

The more recent work of the firm of Venturi and Rauch extends the contextual approach beyond the single building to urban design. Learning from Las Vegas by Venturi, Scott Brown and Izenour (Cambridge, Mass., 1972) examined commercial strip development, particularly in

Las Vegas, in terms of the impact of the automobile, the domination of signs and symbols over forms in space, lighting the "duck" versus the decorated shed, and so on. In the exhibition "Signs of Life: Symbols in the American City," at the Renwick Gallery in Washington, D.C. in 1976, the firm explored the pluralistic esthetic of the American city and its suburbs. Roadside signs and symbols were displayed as well as actual typical urban and suburban living rooms, presented an anthropological studies of tastes and preferences among different people rather than as material to be criticized from the point of view of "good design" in modern architecture.

The firm's early urban concern is seen in the design for the Copley Square Competition, by Venturi and Rauch with Gerod Clark and Arthur Jones, of 1966. The competition was for the square in front of Boston's Trinity Church. In one of the most sensitive examples of modern urban planning, they used a dense planting of trees both to keep the space open and to give it definition and solidity. The ground is covered with a grid of planters repeating in miniature the city's street grid. It is at one repetitive and different, owing to the diagonals cutting through it.

The design for the National Football Hall of Fame Competition (1967, Venturi and Rauch with Gerod Clark) deals realistically with a series of programmatic requirements usually avoided in modern architecture. The first is how the building is perceived by drivers on the highway. Due to the distances and speeds involved, a mere building can no longer engage the scale of the highway, but billboards can. Here the design calls for an electronic billboard as the building façade, communicating to the highway the way the sculpture on the façade of a Gothic cathedral communicated to the plaza. Inside, the football memorabilia to be displayed was not of sufficient size or interest (Knute Rockne's sweater) to inspire a volumetric architecture, so they turned to the projection of images. Thus, while the façade becomes a billboard, the building becomes a large space for the projection of images. The role of architecture remains while its elements disappear.

Contextualism implies responding to existing buildings. In his first completed commission, the renovations of the James B. Duke House for the Institute of Fine Arts, New York University, 1959, Venturi (with Cope and Lippincott, associated architects) displayed a respect for the

original architecture (a 1912 copy of the Hotel Labottiere) that was unusual for the time. Venturi and Rauch's most recent project, the Marlborough-Blenheim hotel/casino at Atlantic City, N.J. of 1977 (David Jacobson Jr., in association with Venturi and Rauch, for the client Reese Palley), shows this same respect. The project, now taken over by other architects, sought to preserve and integrate into the new design part of the historic Marlborough-Blenheim Hotel, designed in 1906 by the Philadelphia architect William Price.

Venturi and Rauch's involvement with existing American commercial reality has brought criticism from established designers who ignore these issues and also from European Marxists, who see such involvement as a commitment to capitalist consumption. The criticisms of established architects are seldom sufficiently well thought out to respond to, but the criticisms of the European Marxists are more interesting. These criticisms find fault with Venturi and Rauch for studying the American vernacular without criticizing its capitalist determinants, yet the same critics now seek to appreciate and preserve the older parts of their cities without being embarrassed by their feudal origins. The Marxists' other criticism is that Venturi and Rauch fail to propose a socialist architecture, although it is not clear what such an architecture might be or how it would be applicable in America today.

The different architectures of Kahn and of Venturi and Rauch, and their different views of human existence, need not be seen as conflicting. Rather they can be seen as complementing each other. Venturi and Rauch's view is similar to the Marxist position which recognizes reality as identical with historical action. But some contemporary Western Marxists have found Marx's analysis of alienation in terms of historical action inadequate and have turned to existentialism for a more adequate tool for dealing with the dynamics of consciousness, and with contemporary technology and everyday life. Mark Poster, in his book *Existential Marxism in Post-War France* (Princeton, 1975) describes some of these Marxists as combining Heidegger's analysis of consciousness with Marx's analysis of socio-economic dynamics to derive a humane socialism. Similarly, a combination of Kahn's analysis of Being and Venturi and Rauch's analysis of context might lead to a really humanly meaningful architecture.

The issue in architecture now is not function, construction or style (Vitruvius' "commodity, firmness and delight"). Rather it is how function, construction, and style can architecturally establish an appropriate place for humanity in nature. The function of architecture rests on the question: are we ahistorical, born apart from any significant spatial or temporal context, with the mind only a blank, unprogrammed computer? And are we then subject only to the laws of rational causality? Or are we historical creatures, born in a particular place and at a time that is somehow special in the evolutionary continuum, with structures of consciousness by which we participate in a complex process of reality that transcends space, time and causality? I believe the latter, and I believe that Kahn's and Venturi and Rauch's thought can together form the basis for architecture of Being-in-context, responsible to such an understanding of the human place in nature.

NOTES (The numbering is missing)

Robert Venturi, *Complexity and Contradiction in Architecture*, New York, 1966, p. 23.

At times this article refers to the work of Robert Venturi, as in the case of the book *Complexity and Contradiction*. However, most of his building has been done in collaboration with various members of his firm, Venturi and Rauch. This is especially true of his partner and wife, Denise Scott Brown, with whom he has collaborated for 17 years. I have tried to credit the work and projects accurately in this article, in response to Venturi's concern for proper crediting. Most of Kahn's buildings referred to in this article also involved the efforts of others, but as Kahn's firm has not insisted on complete crediting, it remains for future researchers to work out who was involved in what.

Brent Brolin uses the phrase in the title of his book, *The Failure of Modern Architecture*, New York, 1976. Brolin presents a fine analysis of rationalism and functionalism, and he has done original research on the inappropriateness of modern architecture in nonindustrial countries.

Charles Moore's arguments are in Charles Moore, Gerald Allen and Donlyn Lyndon, *The Place of Houses*, New York, 1974. Also Charles Moore and Gerald Allen, *Dimensions*, New York, 1976. Jencks' are in Charles Jencks, *The Language of Post - Modern Architecture*, New York 1977. Robert Stern, who has presented his view of post-modern architecture

in lectures, is at work on a book on the subject. Stern claims to have originated the term "post-modern."

See John Lobell, "Design and the Powerful Logics of the Mind's Deep Structures," DMG DRS Journal Design Research and Methods, IX/2(April-June 1975). Behaviorists and positivist approaches are dominant in academic America. Such alternatives as phenomenology, Marxism, critical analysis, and semiology are much stronger in France than here. However, there are many attacks on behaviorist and positivist approaches as they intrude into areas where they are clearly inadequate: see, for example, Suzanne K. Langer, *Mind: An Essay on Human Feeling*, Vol. I, Baltimore, 1967; also, Arthur Koestler and J. R. Smythies, eds., *Beyond Reductionism: The Alpbach Symposium 1968*, New York, 1970; also Theodor W. Adorno et al., *The Positivist Dispute in German Sociology*, New York, 1976.

In Romaldo Guirgola and Jaimini Mehta, Louis I. Kahn, Boulder, Colo., 1975, Van Doesburg and Val Elsteren are quoted as commenting on "De Stijl" manifesto V of 1923: "We have to realize that art and life are no longer separate domains. . . we demand the construction of our environment according to creative laws derived from a fixed principle. These laws, linked with those of economics, mathematics, technology, hygiene, etc. lead to new plastic unity" (p. 218). Note that the distinction between art and life is not to disappear because life is to be transformed by art, but rather because art is to lose its transformative quality. The access of art, through the unconscious, to the order of nature is to be surrendered.. For the first Bauhaus Exhibition, also in 1923, Oskar Schlemmer wrote: "Reason and science, 'man's greatest powers,' are the regents, and the engineer is the sedate executor of unlimited possibilities. Mathematics, structure, and mechanization are the elements . . . based on the laws of nature, these are the achievements of mind in the conquest of nature." (Also quoted in Louis I. Kahn, p. 217).

Thomas Kuhn, *The Structure of Scientific Revolutions*, 2nd ed., Chicago, 1970. Cultural studies which point up the relativity of science

include the work of Oswald Spengler and Marshall McLuhan.

See particularly M. Merleau-Ponty, *Phenomenology of Perception*, New York, 1965. For the "new-look" psychologists, see the work of Jerome Bruner.

An excellent presentation of the inherent limits of logic is found in J. Bronowski, *The Identity of Man*, rev. ed., Garden City, N.Y., 1971. See also Ernest Nagel and James R. Newman, *Godel's Proof*, New York, 1958.

The information on Kahn's philosophy is gathered from several sources, including my seven years as a student at the University of Pennsylvania, where Kahn taught. Kahn spoke about his ideas but did not write them down, so they exist in published and unpublished transcripts of his talks. An excellent presentation of Kahn's thought in the context of Western rationalism is Guirgola and Mehta's *Louis I. Kahn* (see note 6, above), which presents Kahn's thought as he articulated it, closely relating it to his architecture.

These and subsequent notations of Kahn are from unpublished transcripts of talks. Kahn often repeated these statements, and they can be found in various sources.

Lao Tsu, *Tao Te Ching*, trans. Gia-fu Feng and Jane English, New York, 1972.

For this concept of being, see Martin Heidegger, *An Introduction to Metaphysics*, New Haven, 1969. *Essays by Heidegger in Poetry, Language and Thought*, New York, 1975, are also relevant to Kahn's thought. Kahn never relied on the exact word "Being," but as I have found his thought to be similar enough to Heidegger's, I find the word useful in describing Kahn's concepts.

For an analysis of the transformative experience in art see Jose A. Arguelles, *The Transformative Vision*, Berkeley, 1975.

A good analysis of historical context in Venturi and Rauch's work is in Vincent Scully, *The Shingle Style Today*, New York, 1974.

## Louis I. Kahn: Building As Philosophy

(Working title) Parts of a book in progress

By John Lobell

### 1. ARCHITECTURE AS PHILOSOPHY

#### 1.A. Art and Architecture are the Equal of Philosophy

##### 1.A.1. Philosophy

We might describe philosophy as an attempt to understand the nature of the world and of Human Being through intellectual means.

##### 1.A.2. Depiction, Embodiment, and Experience

But is not understanding the world and Human Being also a role of the arts? As architects, we are put off by the claim of the humanities to a privileged role for the written word in that enterprise. All of the arts, including architecture, have just as valid a role as written philosophy in this understanding. Indeed, the arts, and particularly architecture, go beyond philosophical “understanding” to also “embody” and provide direct “experience.”

Thus the Greek Parthenon both depicts and also embodies the Greek Humanist notion of the differentiation of the individual from society, and standing before it, the Greeks experienced that differentiation. The Roman Pantheon both depicts and embodies the Roman will to power, and standing under its dome, the Romans experienced that will. Chartres Cathedral both depicts and embodies Christian faith, and standing under its vaults, bathed in the light of its stained glass, the medieval Christians experienced God coming into manifestation. The Villa Rotunda both depicts and embodies the Renaissance Humanist notion that “Man is the measure of all things,” and standing under its dome the Venetians used its XYZ coordinates to measure the world around them. And Crown Hall both depicts and embodies the industrialized world, and entering the building we experience industrial materials and organization.

It is important to understand that the arts do not illustrate verbal philosophy, but rather stand on their own as its parallel and equal.

We can imagine the morning that Michelangelo’s sculpture of David was pulled from his studio into Florence’s central square. Yes, the David brought together the Biblical figure and patron of the city with

ancient Greece through the sculptural style. But beyond that there must have been an immediate recognition; the thought, “Yes, that’s it, that’s what I have been trying to imagine but did not until now have the imagery.” Michelangelo had produced an embodiment of the Renaissance that had been emerging, but had not been fully imaged before that moment.

Michelangelo did not produce a lecture or an essay. Nor did he produce a “sculpted word,” to illustrate a verbal treatise. Rather he produced a sculpture that had the power to directly affect. It is in this sense that Kahn’s buildings are philosophy.

##### 1.A.3. Frank Lloyd Wright and Le Corbusier

An example of Modern Architecture as philosophy can be seen in the way the buildings of Frank Lloyd Wright and Le Corbusier provide two contrasting experiences of the human place in the world. Corbu takes the Humanist position—the Greek, Renaissance, and sometimes modern position that Human Being is the central and highest thing in the cosmos, standing above nature. Wright takes the Organic position that we associate with the East, that Human Being is a part of nature.

In Humanist architecture, particularly in Greek and neoclassical traditions, the building stands apart from nature, symbolizing the way humans stand apart from and dominate nature. Symmetry allows us to comprehend all of the building as a totality even though we can see only a part of it at one time. The column, with its base, shaft and capital, is related to the human body with its feet, legs and torso, and head. Although the building may be far larger than we, we feel in harmony with it because it shares our proportions. An example of a Humanist building is Palladio’s Villa Rotonda. It dominates its landscape; its bilateral symmetry makes it completely knowable from any angle. And its central domed space marks the place where the human can stand at the 0 point of a Cartesian XYZ axis.

In the Villa Savoye, although Corbu eliminates the center through his column grid, his building stands differentiated from and dominating the landscape. It is not symmetrical on four sides, but it does present frontal symmetry and from any angle we sense its overall form. It stands on its pilotis as we stand on our legs, and Corbu’s later Modular was his updating of classical proportions to bring us into harmony with the building.

In Organic architecture, the building is integrated with nature. In some styles of Chinese and Japanese prints, we do not at first realize that there are buildings or even people in the scene—they blend so thoroughly

into the natural setting. An example of this architecture is the 17th Century Katsura Imperial Villa, in Kyoto, Japan with its asymmetrical modularity, use of wood and bamboo, and its spontaneity.

In his Robbie House, Wright uses horizontality to integrate the building into the prairie. The house is different from every approach on the outside, and as one moves through the inside, the experience of the spaces is different depending on one's path. Thus there is no one building that we experience. In an existential act, we make the building differently each time depending on our path approaching and moving through it. The chimney core pushes us out of the center in a modern Copernican revolution to wander an unfixed path along with nature. At Falling Water, Wright again uses an open plan, and here integrates the building in the side of a hill.

So here we have two of the most important architects of the 20<sup>th</sup> Century taking very different positions on Human Being, Corbu contending that it stands apart from and above nature, and Wright contending that it is a part of nature. The issues these opposing positions raise are very current as we contemplate our ecological relationship with the planet. As this book unfolds, we will see Kahn's position on the human place in the larger order of things as presented by his buildings.

## 1.B. European Culture

### 1.B.1. The Cathedral Form

Western European culture crystallizes mythologically in the Arthurian romances and architecturally in the Romanesque and Gothic cathedrals. This culture was symbolically oriented to reaching out over space and time, and one has only to stand in the nave of a Gothic cathedral looking up at the soaring vaults to realize that the descendant of the builders would be the people who would circumnavigate the planet and go out into space. The basilica form of these cathedrals with its massive portal entry, nave, side isles, transept, apse and vaults, evolves from its first hints at Newgrange Passage Mound in the Boyne Valley of Ireland, 3000-2500 BCE, and is expressed in an unbroken line from Romanesque St. Etienne, to Gothic Chartres, to Renaissance Sant'Andrea, to Baroque San Carlo, to Rococo Vierzehnheilgen.

Then it stopped and what is known as the crises in European history began. The church lost its centrality and authority, democracy began to replace monarchy, and industrialization changed the relationship to nature. Architecture, its roots lost, rummaged through history, engaging in a "battle of the styles" in the second half of the 18<sup>th</sup> and the 19<sup>th</sup> centuries.

Renaissance revival because it was the last sensible moment. Roman revival because Europe was rooted in Roman republican values. Greek revival because Greece was Rome's source. Gothic revival because it represented the Christian tradition.

### 1.B.2. The Enlightenment

In the 18<sup>th</sup> Century, the European Enlightenment, building on Renaissance Humanism, began to forge a new human identity built not on faith and authority, but on reason. "Man is the measure of all things," borrowed from the Greeks, became the slogan of the Renaissance. With Bacon and Galileo, and culminating in Newton, we saw the formation of the scientific method for extracting the secrets of Nature—observation by the senses and reason, particularly through mathematics, by the mind.

The Enlightenment extended this scientific approach to the human realm. Science, using the reasoning powers of the educated mind, could understand the universe (cosmology), nature (the physical sciences), society (political science) and human beings (psychology). And not only understand, but also control toward the objective of making a better life. We associate the Enlightenment with such European thinkers as Voltaire and Diderot and such American counterparts as Franklin and Jefferson.

### 1.B.3. Architecture And Rationalism

While we do not see the rationalist ideal fully realized in architecture until the modernism of Wright, Corbu and Mies, its seeds in theory came much earlier. In 1753, in his *Essai Sur L'Architecture*, the Abbé Laugier called for structural determinism. In 1863-72, Viollet-le-Duc wrote in his *Entretiens sur l'architecture*, "In architecture there are two necessary ways of being true. It must be true according to the programme and true according to the methods of construction. To be true according to programme is to fulfill, exactly and simply, the conditions imposed by need; to be true according to the methods of construction is to employ the materials according to their qualities and properties ... purely artistic questions of symmetry and apparent form are only secondary conditions in the presence of our dominant principles." [Curtis, p 27]

Viollet-le-Duc's drawings with their iron braces supporting Gothic vaults, and Labroust's iron arches for the Bibliotheque St. Genevieve supported by Renaissance masonry walls did not fully achieve this structural purity. The cases when pure structural expression with industrial materials did triumph, as in Paxton's Crystal Palace of 1851 and Eiffel's Tower of 1889, were set safely apart from official architecture in world's fairs. But by the late 19<sup>th</sup> Century Auguste

Choisy, highly influential on architectural education, was holding that expressive form was the result of constructional technique, and William Le Baron Jenney, Louis Sullivan and other Chicago School architects were building skyscrapers whose aesthetics derived from their structural steel frames.

## **1.C. The Beaux Arts and Modernism**

### **1.C.1. Kahn's Education**

Kahn was educated in the Beaux Arts tradition at the University of Pennsylvania under the Beaux Arts master, Paul Philippe Cret, from 1920 to 1924, and later worked for Cret. While in school, Kahn was not exposed to Modern Architecture, but he became aware of it after graduating, and wrote of the 1930s, "I lived in a city called Corbu," referring to Le Corbusier's books that he poured over. We are going to see in Kahn's work a reconciliation, or more accurately a transcending of tensions between Beaux Arts and Modern Architecture.

### **1.C.2. Beaux Arts Architecture**

Beaux Arts architecture is named after the Ecole des Beaux Arts, the school in Paris where many late 19th and early 20th Century American architects studied. Monumental buildings of the turn at the Century are usually built in this style, notably in New York City: Columbia University's Lowe Library, the Metropolitan Museum of Art, the New York Public Library, Grand Central Station, and the old Penn Station. It was an architecture that communicated monumentality, solidity, and a rootedness in Europe.

The Beaux Arts vocabulary was Roman (which itself had Greek origins) as extended through the European Renaissance and Baroque. The use of such a vocabulary had a practical justification—it was highly developed, adaptable and widely understood. But one cannot escape that this architecture implied that Americans at the turn of the 20<sup>th</sup> Century were historically Europeans. In doing so, it implied that we were descended from the people of the Iliad and the Odyssey and our stories were built on theirs; from Plato and Aristotle and our learning was built on theirs; from Greek and Renaissance Humanism and our sense of what a person is was built on theirs. We were descended from Rome, with our laws based on Roman law, and we were a civil society modeled on Roman society. We were descended from Renaissance Italy and Baroque England and had a scientific culture that realized the mechanical dreams of Leonardo and the astronomical dreams of Newton. That may seem like a lot to infer from Doric, Ionic, and Corinthian columns and pediments, but it is all there.

By the turn of the 20<sup>th</sup> Century in America, Modern Architecture as seen in the work of Sullivan, the Chicago School, and early Wright had appeared, and was in a struggle with the Beaux Arts. In the showdown of the 1893 Chicago World's Fair, the Beaux Arts won, and Sullivan declared that the Fair would set American Architecture back fifty years. But the victory was temporary, and the ascendancy of Modern Architecture was inevitable as the rise of modern industrial culture brought such questions as: What if we are no longer Europe's cultural descendants? What if the Roman Empire ended fifteen hundred years ago? What if our mathematics of non Euclidian geometries transcends the calculus of Newton, and quantum theory denies the causality of LaPlace? What if our phenomenological philosophy is not prefigured in Socrates, our laws derive as much from English common law as from Roman law, and our society is one of individualism and not civic virtue? And what if Americans come from Asia, Africa and the Americas as well as from Europe, and what if Buddhism underlies our spirituality as much as does the Greco-Judeo-Christian tradition? If all of this is true, and if we partake of a new universal humanity, then an architecture that speaks in a universal, not a European, vocabulary is called for.

### **1.C.3. Modernism and Modern Architecture**

What was the notion of Human Being that had emerged by the 20<sup>th</sup> Century? It was a materialistic notion that can best be summarized by the great late 19<sup>th</sup> and early 20<sup>th</sup> Century figures, Darwin, Marx, and Freud.

Darwin's theory of evolution by natural selection tells us that we are natural animals, sharing common ancestors with the apes, and different from them only slightly. We arrived at our human state by mechanistic chance and will eventually evolve to something else. Our intelligence and consciousness are not consequences of a divine nature, but of evolutionary pressure on neural processes.

Marx's insight into history tells us that the nature of an age is a consequence of its material means of production. Marx contends that just as the physical sciences gave us an understanding of and a control over nature, so his scientific socialism now gives us an understanding of and control over society and even history.

And finally Freud's theory of the unconscious tells us that our mental processes are analogous to mechanisms, with pressure from the libido, repression by the super ego, and release through socially productive sublimation. Our motivations are not the lofty forwarding of the human enterprise, but the

fulfillment of biological urges under social constraints.

Humans, then, are natural creatures, understandable and controllable by the social sciences just as nature is by the physical sciences. And Modern Architecture is a part of that scientific insight, itself growing out of natural laws and serving social purposes. Reason and scientific knowledge are the defining human qualities and the means through which we know the universe, the world, our society and ourselves. All will eventually be knowable, predictable, changeable, and controllable. Reason is universal—the highest human state, and its method is extensible to the furthest dimensions of the universe and of time. We human beings are a part of nature, not transcendent of it, and subject to its laws.

Reason is expressed in Modern Architecture through a clarity of the functions of a building and the spaces that serve them, and the clarity of its structure and materials that are themselves the products of modern industrial technology, standardized production, and engineering calculations.

Along with these notions came changes in concepts of space and time. Einstein's relativistic space-time replaced the uniform and instantaneously juxtaposible space and time of Newton's clockwork universe, paralleling not only modern space in architecture, but also Cubism in painting and the time of the novels of Proust and Joyce.

Echoing Viollet-le-Duc's "[Architecture] must be true according to the programme and true according to the methods of construction," Oskar Schlemmer, writing for the first Bauhaus Exhibition in 1923 stated, "Reason and science, 'man's greatest powers,' are the regents, and the engineer is the sedate executor of unlimited possibilities. Mathematics, structure, and mechanization are the elements, and power and money are the dictators of this modern phenomena of steel, concrete, glass, and electricity...." [page 217 Girugola book]

In the broader culture, the rationalism of the Enlightenment was joined by the irrationality of Romanticism. In architecture, the rationalistic goals of the Enlightenment were kept, but were now to be achieved by the romantic figure of the hero-architect.

In *Flight of the Wild Gander*, the mythologist Joseph Campbell addresses the movement of our culture from one defined, bounded, and secured by tradition, to one that is free from historical tradition. He writes, "Within the time of our lives, it is highly improbable that any solid rock will be found to which Prometheus can again be durably shackled.... The creative researches and wonderful daring of our scientists

today partake far more of the lion spirit of shamanism than of the piety of priest and peasant. They have shed all fear of the bounding serpent king." [gander, p 192]

In like manner, the modern architects address a world cut free from its historical moorings and in free fall, seeking to anchor that world only to its own also free falling present.

#### 1.C.4. Mid 20<sup>th</sup> Century Architecture

In the United States of the mid 1950s and early 1960s, when Kahn began his important work, the most influential buildings were perhaps Mies's Crown Hall, Lake Shore Drive Apartments, and Seagram Building; SOM's Lever House; and Corbu's Monastery of La Tourette. Corbu's Ronchamp, Wright's Guggenheim, and Saarinen's TWA were regarded as interesting, but due to their expressionistic qualities, peripheral to the main concerns of architecture at the time. What is common among these influential buildings? They observed (or were supposed to observe) strict programmatic functionality; honest expression of space, structure, and materials; a lack of ornament; an emphasis on the structural grid; a rejection of hierarchy in favor of uniformity; the absence of all reference to the past; and a celebration of industrial technology.

In the United States of the 1950s and 1960s, when Kahn began his important work there were four dominant approaches to architecture: the universal of Mies, the prototypical of Gropius, the particular of Le Corbusier, and, in reaction to these, the expressionistic of Saarinen. Kahn's approach is different from all of these.

The most prevalent of these approaches was, of course, Mies's universal space. Having stipulated that most programs could be fulfilled in an open flexible space, Mies's primary interest in architecture became the enveloping of that space. The Miesian approach separated the building from function, both as programmatic use and as institutional meaning.

Gropius's prototypical architecture is best seen in his Total Theater (1927), which was presented as the solution to the theater, applicable in any time or place for any form of theatrical production. In the early 1950s, the prototypical approach was used by Breuer, Johnson, Johansen, and Franzen in attempts to find the solution to the house, with differentiation between public and private space the central issue. The limitation of this approach was that it produced an architecture with a weak relationship to a given time and place.

In reaction against the sparseness of the early Modern Movement, Le Corbusier, in his post-War buildings, began to search out particular details in function to generate articulation in form. In this country, Eero Saarinen sought expressionist alternatives to the sparseness of the Miesian box. Kahn was not influenced by Saarinen's expressionism, although he was influenced by Le Corbusier's interest in the relationship between program and form.

In experiencing these approaches to architecture we experience a materialistic Human Being, independent of any historical past, existing in a new and unique time. We experience a world governed by the laws of the physical sciences, populated by people governed by the laws of the social and psychological sciences. Society is democratic and bureaucratic. It is a Human Being with power over nature, mastery of materials, and free movement through space and time. It is forward looking and optimistic.

### 1.C.5. Dissatisfactions with Modernism

Despite the optimism of Modern Architecture, by the mid 1950s it was seen as inadequate. Kahn said of Mies's Seagram building, "Take the beautiful tower made of bronze that was erected in New York. It is a bronze lady, incomparable in beauty, but you know she has corsets for fifteen stories because the wind bracing is not seen. That which makes it an object against the wind which can be beautifully expressed, just like nature expresses the difference between the moss and the reed. The base of this building should be wider than the top, and the columns which are on top dancing like fairies, and the columns below growing like mad, don't have the same dimensions because they are not the same thing. This story if told from realization of form would make a tower more expressive of the forces. Even if it begins in the first attempts in design to be ugly it would be led to beauty by the statement of form."

Kahn realized that to move beyond the International Style glass box what was needed was more than the filigrees of Yamasaki, the expressionism of Saarinen, or the muscularity of Rudolph, three prominent attempts of the time to enrich Modern Architecture. The problem was not in the construction details, but in the very premises on which Modern Architecture was built. Architecture had to be rethought from the beginning.

## 2. KAHN'S PHILOSOPHY OF ARCHITECTURE

### 2.A. Philosophy

Kahn's architectural search was built on continually questioning. Much of this questioning was done in dialogue with his colleagues and students, and as he slowly built a framework of ideas, he also developed his own vocabulary, including such phrases as Order, the Measurable and the Unmeasurable, Silence and Light, Desire, and Form and Design. He had his own meanings for these words that were not precise, as he spoke in poetic metaphor, but what he gave up in precision, he more than made up in depth of insight. [See Lobell, BSL]

#### 2.A.1. Monumentality

Modernism rejected monumentality as a glorification of a no longer relevant past. Lewis Mumford wrote: "... if it is a monument it is not modern, and if it is modern it cannot be a monument. [Ockman, 27 from Mumford *The Culture of Cities*] Monumental buildings celebrate Western European culture by using classical vocabularies and by concretizing its institutions. In addition, the totalitarian regimes of the 1930s and 1940s associated monumentality with an assertion of a dangerous nationalism and a celebration of non-democratic traditions. But by the mid 1940s, several architects began to question their stand against monumentality. They felt that there were situations requiring buildings with some kind of monumentality that would outlive the period that created them and express the highest cultural values.

In their 1943 essay, "Nine Points on Monumentality," José Luis Sert, Fernand Léger, and Sigfried Giedion wrote: "Monuments are human landmarks which men have created as symbols for their ideals, for their aims, and for their actions. They are intended to outline the period which originated them, and constitute a heritage for future generations.... Monuments are the expression of man's highest cultural needs. They have to satisfy the eternal demand of the people for translation of their collective force into symbols. The most vital monuments are those which express the feeling and thinking of this collective force—the people." [Ockman 29] Note that this feeling is more optimistic than that of José Ortega y Gasset in *The Revolt of the Masses* or Wright in *Genius and the Mobocracy*.

Kahn also felt that while modernism was right in rejecting the outdated approaches of the Beaux Arts, it had failed to discover a new monumentality underlying 20<sup>th</sup> Century conditions. In 1944 he wrote: "Monumentality in architecture may be defined as a quality, a spiritual quality inherent in a structure which conveys the feeling of its eternity, that it cannot be added to or changed." He claims this role for the Parthenon for the Greeks, but then asks if our relativistic times may not permit of such a single intensity of purpose. He is optimistic that we may yet

find such purpose as we recognize the importance of our new institutions and begin to use our new structural materials: “But have we yet given full architectural expression to such social monuments as the school, the community or culture center?... Welding has opened he doors to vast accomplishments in pure engineering which allows forms of great strength and efficiency to be used.”

Kahn had been socially progressive during the depression, and had worked on low cost housing, but his Mill Creek public housing begun in 1952 ultimately faired no better than most other public housing projects of the 1950s and 60s, and his Trenton Jewish Community Center was never realized. On the structural side, he was one of the most structurally progressive architects of his time, for example using pre-cast, pre-stressed, post-tensioned concrete at Richards, but he was never comfortable with light-weight steel. In the 1060s he remarked: “I believe that the buildings of the future will look like giant spiders, made of high strength steel. But I am comfortable building in masonry.”

Giedion et al and Kahn were right, something was lacking in Modernism, but if it was monumentality, what was to be the nature of a new monumentality? The Beaux Arts buildings Kahn had studied in school were big, heavy, and rooted in the past, but they no longer addressed our modern conditions. By the mid 1950s, Kahn had stopped speaking of monumentality, and started speaking instead of Order, seeing Order as a deeper and more archetypal expression of what he had been seeking in monumentality. He struggled to define Order, and eventually realized that it was not possible to do so precisely, saying, “I stopped by not saying what it is, just saying, ‘Order is.’”

### 2.A.2. Order

While acknowledging the futility of precisely defining “Order,” we will attempt to describe what Kahn means. Khan speaks of the Order of brick (“If you think of brick, and you’re consulting the Orders...”), of a building (“What does this building want to be?” and “The building is the record of the making of the building.”), of ourselves (“The man is the record of the making of the man.”), of nature (“The rose is the record of the making of the rose.”), the creative process (“Silence, the Unmeasurable, desire to be, desire to express, the source of new need, meets Light, the Measurable, giver of all presence, by will, by law at a threshold which is inspiration, the sanctuary of art, the Treasury of Shadow.”), and even of existence itself.

While there are elements of Platonic Idealism to Kahn’s philosophy, it is more a philosophy of essences in which the nature of something comes not

from outside the thing, but from its inner existence will. Under his diagram of a seed split open to show the germ, Louis Sullivan wrote, “The germ is the real thing. Within its delicate mechanism lies the seat of identity, the function which is to find its true identity in form.” And Wright wrote: “Deeper than the truths of Philosophy or the laws of morality is the sense of honor. What is honor? Not the rules of a code—but the nature of honor. What would be the honor of a brick? That in the brick which makes the brick a brick.” What Kahn calls “Form,” Sullivan calls “function” and Wright calls “honor.” It is the existence will—that which makes the thing what it is. Thus Order is the way something exists with integrity, clarity, and rootedness, fully expressing its inner nature.

Kahn came to realize that it was not monumentality that Modern Architecture was lacking, but Order, a rootedness in its own nature. If we were to describe Kahn’s architectural quest in one phrase, we might say that it is an attempt to bring Order into Modern Architecture. Superficially, Kahn does this by rejecting lightweight steel construction in favor of heavy concrete evocative of ancient construction, but more profoundly he does it by looking for the existence will of every aspect of the building, from the institution it houses, to its structure, materials, mechanical, and details. It is how he does this that we exam in this book.

### 2.A.3. The Nature of Man: The Measurable and the Unmeasurable

Kahn begins his approach to architecture with a new notion of Man. (Note that when we use the term “Man” rather than “Human Being” in our discussion of Kahn’s philosophy, it is because that is the term he uses.)

Finding the materialistic notion of the modernists inadequate, Kahn says that Man is made by nature, but is not nature. We are a part of nature, and to that extent we are Measurable and understandable by science. But we are also more than nature in that we are Human, as evidenced by our consciousness and our Desire. He refers to this part of Man as Unmeasurable.

### 2.A.4. Desire

For Kahn, our needs define our natural selves, but our Desires define our Human selves. We need to eat and we need shelter. So do animals. But we Desire to achieve, to serve, and to define and project ourselves. We desire to be a musician or a filmmaker or an architect.

There are many desires, but Kahn says they can be organized under three great desires: the Desire to learn, the Desire to meet together, and the Desire for well-being.

### **2.A.5. Institutions**

In order to assure that we have the best opportunity to fulfill our Desires we create institutions. Kahn says that school began when a group of people were gathered under a tree and one of them was speaking. Later the others realized that the one speaking was a teacher and they wanted to assure that their children would have the same opportunity to learn from the speaker. Not wanting to trust to the chance of the group again gathering, they built a school to assure the experience. The school is an institution. Kahn recognizes that institutions suffer from bureaucratic limitations, but he says that rather than abandon institutions because of their limitations, which would be nihilistic, we must continually struggle to improve them. Thus institutions grow out of Desire, and Desire defines our Humanness.

## **2.B. Architecture**

### **2.B.1. Architecture as The Art of Institutions**

For Kahn, architecture is not the art of space (sculpture can encompass space) or of use (we use all kinds of tools) but of human institutions. If we think about it, all architecture serves institutions: the house serves the institution of residence; the school serves the institution of education; the laboratory serves the institution of science; the church serves the institution of religion.

The “art” of architecture is in the insight the architect brings to the institution. For example, in designing a school, the architect might address such issues as: What does it mean that a child is entering their culture? What is education? Is education answerable to the individual or society? Should education look back to tradition, or forward to new needs? Good architects struggle with such questions, and we see their responses in their buildings.

### **2.B.2. Form and Design**

Through the Beaux Arts tradition Kahn knew an architecture that not only had a classical vocabulary, but also a solidity that modernism lacked. But Kahn realized that the Beaux Arts was no longer appropriate to his times and he that he must restore Order to architecture not by going back to an historical past, but by going outside of time to what he called Beginnings or Volume Zero.

In his theory of mythology Joseph Campbell

refers to “universal forms” and “local transformations,” or what we might call archetypes and manifestations. We see a similar approach by Carl Jung in his concept of archetypes. An example of this approach is found in religion, in which an archetype might be a dying and resurrecting god, born miraculously and associated with a cross. In manifestation, it might be Christ for the Christians, but also Osiris for the Egyptians, Tammuz for the Babylonians, Orpheus and Dionysius for the Greeks, Buddha for the Indians, and Quetzalcoatl for the Meso-Americans. Thus the archetype is a pattern that stands outside time and culture, existing in Volume Zero, while the circumstantial is the manifestation of the archetype within a given time and culture, taking on the cloak of that time and culture.

Kahn uses the terms Form and Design for a similar dichotomy. Kahn begins the design of a building with the question, “What does this building want to be?” The answer gives him the Form, which is the archetypal nature of the building.

Kahn’s archetypal approach to architecture searches for the essence of an activity, the motivating collective mind-forms that are then inflected in a building through the circumstances of a unique combination of site, client, labor, budget, etc. Taking the example of a school, when Kahn asked, “What does this building want to be?” he was asking what is the archetypal meaning of the institution of education. To find this meaning is to find the Order of the architecture that will serve the institution. Thus an archetypal solution transcends the universal in that it is for education, not just for any function which fits the space, it transcends the particular in that it serves the spirit of school as well as its particular functions, and it transcends the prototypical through its concern with finding the more general Forms (“Form” in Kahn’s sense) which respond to deep and timeless human patterns rather than the more specific shapes which respond only to transitory social patterns. And, unlike prototypical solutions, archetypal architecture does not aspire to “the solution” which can theoretically be repeated at any time in any place, since the archetypal becomes expressed only in a particular manifestation in specific conditions.

In the case of a chapel, the answer Kahn gives is, “First you have a sanctuary, and the sanctuary is for those who want to kneel. Around the sanctuary is an ambulatory, and the ambulatory is for those who are not sure, but who want to be near. Outside is a court for those who want to feel the presence of the chapel. And the court has a wall. Those who pass the wall can just wink at it.” This gives Kahn the “Form” of the

chapel, its archetypal nature before the encounter with the circumstantial. The encounter with the circumstantial, under the creative will of the architect, leads to the “Design.”

There are two interesting implications to the question, “What does this building want to be?” One is that the building, even though it has not yet been built, or even designed, has some kind of existence. The other is that a building as an inanimate thing can “want” something.

We might think of an acorn as “wanting to be” an oak tree. We know that the acorn has DNA inside it that contains the instructions to make the oak tree, and we could say that “wanting to be” is a metaphor for the power of the DNA. But these architects speak of brick and steel, which have no DNA. Sullivan asks how can it be that steel, an inanimate substance, can have a will. He answers that of course it cannot. But it can in the creative presence of the architect.

Now comes the question, was there ever anything in the brick and steel, or does all of this come from the architect? We remember that Michelangelo said the he did not create his sculptures, but that the figures were already in the stone and he just released them. Were the figures really there?

The phenomenological philosophy of Maurice Merleau-Ponty sees the human being as a body-subject that organizes and gives meaning to its world. Quantum physics shows that some particles do not gain their characteristics until they are observed. In this light we might see the creative theories of Michelangelo, Sullivan, Wright, and Kahn as not just metaphors, but as philosophical positions about the nature of reality that have parallels in phenomenological philosophy and quantum physics.

### **2.B.3. Essences of Materials and Structural Expression**

#### **2.B.3.a. Structural Expression**

We generally associate Modern Architecture with the expression of structure and materials, for example Mies with glass and steel, and Corbu with concrete. However, on looking carefully at the buildings of these architects, we find that they often express the *idea* of industrial technology rather than industrial technology itself, or even the techniques used in constructing the buildings. Let us look at two examples, the Barcelona Pavilion and the Villa Savoye.

#### **2.B.3.b. The Barcelona Pavilion**

When we first look at Mies’s Barcelona Pavilion of 1929 we see freely placed marble partition walls and

a grid of eight mirror-chrome steel columns supporting a thin flat roof slab.

The actual construction of the Barcelona Pavilion is quite different from what we see. The columns are composites, each made up of four angles bolted together. Other architects, including Otto Wagner, express their composite columns and make a design feature of the patterns of bolts. Mies covers his composite columns with thin bent sheets of chrome-plated steel held in place with flush screws, giving the impression that they are single pieces of high-tech material. In addition, the cross-shaped configuration of Mies’s columns symbolize the Cartesian coordinates that dominate his design, but are structurally inefficient, as they concentrate the moment at the centers of the columns, rather than at the outer edges, as is the case with an I beam or a wide flange.

The thin flat ceiling that we see on the Barcelona Pavilion is actually a frame of steel girders and beams as much as 16 inches deep. It tapers at the edges so that what we see is much thinner, and then the bottom of the steel grid is covered with plaster so that we see a smooth flat surface.

Finally, the partition walls are masonry, veneered with marble and other fine stone. But while Wagner, Breuer and Kahn show at the corners that we are looking at thin sheets when they use stone veneers, Mies makes the stone solid at the ends of the walls so that the veins flow around the corners, giving the impression that we are looking at solid blocks.

#### **2.B.3.c. Villa Savoye**

When we first look at Le Corbusier’s Villa Savoye of 1931 we see a white box with a long band of windows supported by a grid of columns. Inside we see white walls and flat ceilings.

The columns support a concrete floor constructed in a technique called lost tile. Large structural tiles are laid out in a grid on formwork with spaces between them. Reinforcing bars are placed in the spaces, which, when the concrete is poured, become structural beams. When the formwork is removed, the tiles stay in place and are flush with the beams, presenting a smooth ceiling once it is plastered and painted, even though it is structurally a waffle slab.

This slab cantilevers out beyond the column line and supports an edge beam, which in turn supports the part of the wall that is under the long window. The wall is constructed of two layers of concrete blocks with an air space in between. The outer surface is stuccoed and the inner surface is plastered. The section of wall that is above the long ribbon window is supported by a concrete lintel, which is *hung* from

an edge beam supported by the roof slab. There is no way one could figure out any of this by looking at the building.

#### 2.B.3.d. Exeter

When we first look at Kahn's Exeter Library of 1965-72, we see a large brick block of a building with what appear to be deep set puncture windows with fixed panes of glass above wood panels.

As we look closer, subtleties emerge. The windows are not punctured into a masonry wall, but are framed by structural brick piers and almost flat arches. The load-bearing nature of the piers is indicated by the fact that they get wider as they come down. And the brick above the windows is not spandrels supported by lintels, but rather jack arches. The diagonal cuts at the building's corners show us the thickness of the exterior walls, telling us that they are structural masonry walls, not veneer.

On entering the building we see that the brick structure extends about 12 feet into the building, with brick interior columns picking up more flat jack arches extending in from the exterior piers. There is then an inner ring of concrete structure with long spans, and a central court with huge 18-foot deep concrete girders.

We are consistently told how the building is built—how its structure works and what the materials are and how are put together.

#### 2.B.3.e. Essences

The point here is not to show that Kahn's approach to construction is more *honest* than Mies's or Corbu's. Honesty is a diversion in Modern Architecture, predicated on a false notion of strict functionalism, evident in the debate over the bronze mullions on Mies's Seagram Building—if they are needed for wind bracing, they are permitted; if they are not needed, they are impermissible applied ornament. As we can see, neither the Barcelona Pavilion nor the Villa Savoye, two of the most important icons of Modern Architecture, are "honest" in their expression.

Each of these architects has different *intentions*. Mies and Corbu address our industrial world and explore what living in that world means to us. Kahn's concern is with what he calls Order.

For Mies, *precision* is the defining quality of industrialization. He makes his point through precise, mirror-chromed columns, reflecting the potential for perfection in industrial production, even if that production could not at that time make the columns he wanted, and he had to simulate them.

For Corbu, *standardization* and *monolithic construction* are the defining qualities of industrialization. He makes his point by using the same dimensions for his lost tiles and for his windows in the Villa Savoye as he uses in his other buildings of the period, and by stuccoing over his edge beams and masonry walls to give them a monolithic appearance.

Both the Barcelona Pavilion and the Villa Savoye present the experience of "industrial," but they are crudely hand constructed. However, this does not invalidate them. An essay about industrialization could be written with a fountain pen—it need not be offset printed to be valid.

Kahn's structural expression is not about industrialization, it is about the essences or existence wills of materials. His is not showing us industrial construction technologies in order to tell us what it means to live in an industrial world. Rather, he is allowing concrete, brick, and other materials to tell us about their Order—their inner nature—and thereby our own Order. Since Kahn is building in the 20<sup>th</sup> Century, his materials are usually industrial, but not always. The brick outer ring of the Exeter Library could have been built in ancient Rome, and Kahn expresses that fact in the way he uses the brick, wanting us to know about its heritage.

Kahn's structural expression is intended to bring us back to Beginnings and to reveal the existence will or Order of each material. In Kahn's well-known conversation with brick he asks, "What do you want, brick?" Brick says to you, "I like an arch." This is the same existence will or Order that makes the building "want to be," and that underlies our Human Being.

### 2.C. The Design Process: Three Examples

#### 2.C.1. Discussion

Let us now look at Kahn's approach to the design process in relationship to that of the Beaux Arts (the tradition in which he was educated) and orthodox Modern Architecture (the tradition in which he began his practice).

There is, of course, a difference between Beaux Arts and Modern Architecture in appearance, but there is also a difference in the design process used by architects in each tradition. The Beaux Arts architect works from prototypes, while the modern architect works from a program. As we will see, Kahn's approach differs from both.

#### 2.C.2. Beaux Arts Architecture

The most obvious prototypical aspect of the Beaux Arts is the vocabulary of the Greek and Roman Doric,

Ionic, Corinthian, and Tuscan orders, along with arches, vaults, and domes. But if we look at four prominent Beaux Arts buildings—the Boston Public Library, the New York Public Library, New York’s Metropolitan Museum of Art, and Washington’s National Gallery—we see that, besides their classical vocabularies, they all share a set of basic elements in their layouts that have been refined over hundreds of years. These elements are:

#### 1. Entrance

With stairs, columned portico, doors, and vestibule, which announce the building’s importance, show us where to enter, and negotiate our transition from outside to inside.

#### 2. Lobby

Often with vaults or dome, which orients us to the activities of the building.

#### 3. Great stair

Connecting the levels of the building and moving us through them, which helps establish a hierarchy of spaces and provides orientation and opportunities for encounters with other users of the building.

#### 4. Circulating halls

Not just corridors, but wide and naturally lighted, which are not just for circulation, but are spaces in their own right for various undefined activities.

#### 5. Large, medium, and small spaces

Well proportioned and well lighted, that can accommodate a wide range of activities.

#### Diagrams

##### Plans of

- Boston Public
- New York Public
- National Gallery
- Metropolitan Museum of Art, New York

These five elements are prototypes on which the architects draw. In some ways design from prototypes is very powerful. Each of the elements reaches back into time and embodies centuries of wisdom and refinement with regard to proportion, lighting, movement, etc. The weakness of this approach is that it often does not respond well to radically changing times and totally new activities. A major implication of design from prototypes is that there is constancy in Human Being over time.

### 2.C.3. Modern Architecture

Modern Architecture saw democratization, industrialization, new building types, new construction methods, and new materials as bringing about changes so fundamental that the prototypical approach could no longer suffice. The factory, office

building, school, hospital, community center, and public housing were new or newly formulated building types that modern architects felt could not find precedent in previous times. Nor could precedents be found for the use of steel, glass, and reinforced concrete. And certainly there was not prototype for the high rise, unless it was the gothic spire.

To respond to these new circumstances, building types and materials, modern architects sought to analyze and respond to their characteristics here and now, not start with solutions from the past. Recall Viollet-le-Duc’s statement that architecture “... must be true according to the programme and true according to the methods of construction.” From this awareness, the “program” became the dominant force in design. Activities are listed, and with each activity there is a description of requirements and a square footage. The designer then relates the activities to each other and to the site through a bubble diagram. Then the bubbles are filled out to the required square footages and framed by a structural system. Finally the building is clad in appropriate materials.

The 1926 Bauhaus building by Walter Gropius is an example of this approach. Gropius identifies the major areas of the building as workshops, classrooms, administration and dormitories. Each of these is given the kind and amount of space it needs: large open flexible space for the workshops, linearly divisible space for the classrooms, and individual units for the dorm rooms. Each section is then positioned in relationship to the others to facilitate circulation and access. Appropriate structural systems are chosen, and the spaces are clad in materials that reflect their uses: a huge glass curtain wall for the workshops, ribbon windows for the classrooms, and puncture windows and balconies for the individual dormitory units.

#### Diagrams

- The Bauhaus

Designing from a program is a powerful way of creating buildings appropriate for their initial functions. However, functionality is not always enough. We also expect spaces to have character and to reflect ourselves as full human beings. In addition, modern architecture also demands originality, with each architect developing their own language, leading to a situation in which refinement is difficult.

It is exceptional for an architect not drawing on any tradition and exercising originality to design every building well. That is why mediocre 19<sup>th</sup> Century buildings tend to be better than mediocre 20<sup>th</sup> Century buildings. And spaces conceived functionally tend not to fare well when functions change over time, as they often do in our changing world.

The implication of design from a program is that there is nothing constant in human nature—indeed there is no human nature, just a blank wet computer hard wired for learning and response. Every circumstance is new and design always starts from scratch. In their “Manifesto of Futurist Architecture,” Sant’Elia and Marinetti write, “Architecture is breaking free from tradition.... Everything must be revolutionary.... Houses will last less long than we. Each generation will have to build its own city.” [Conrads, p 34-38] The Modern architect continually confronts the modern condition of free fall.

#### 2.C.4. Kahn’s Architecture

Central to Kahn approach to design is his notion of Form and Design which draws from both the Beaux Arts and Modernism, but which is very different from either of them. Kahn’s buildings in the 1930s and 1940s were in the Modern tradition, but he felt something was missing. He knew that he could not return to the solidity and rootedness in historical meaning of the Beaux Arts. Instead, he would have to bring a solidity and meaning into Modernism by going back not to historical periods, but to archetypal Beginnings outside of time in a search for Order in a place he called Volume Zero.

Whereas the Beaux Arts seeks precedents in what already exists, Kahn’s approach seeks the meanings of even new activities or institutions through understanding their Orders. He also seeks the Form or archetypal character of the spaces for those activities or institutions, and then creates the Design or manifestation of that Form in the circumstances of its time and setting.

A Form statement expressing the existence will of a school might be, “A school is a place where it is good to learn,” or it might be a Form Diagram, as in the case of the First Unitarian Church and School in Rochester New York, 1959-69. Kahn began by drawing a series of concentric circles, and he said: “First you have the sanctuary for those who kneel,

and then you have the ambulatory, for those who would be near, but not kneel. Then you have the corridor, and around the corridor is a wall, and those who pass and do not enter just wink.”

The design process for Kahn then becomes a back and forth testing of the idealized Form against such circumstances as the program and the site. If the idealized Form can be reasonably altered to accommodate the circumstances, the Design holds. If the Form becomes too distorted in the process of accommodating the circumstantial, then the Form has to be rejected and the process begun again.

#### Diagrams

- Rochester
  - Concentric circles
  - First plan of Rochester
  - Test, with rooms running back
  - Final plan

#### 2.D. Building as the Vocabulary of Architecture

The means the architects has to manifest their art is the building. Not “architecture.” Architecture is an elusive abstraction. Architects make *buildings*. Kahn said: “Art cannot be Art unless it is a work and not something abstract, out in the blue somewhere.” For some architects today the building’s structure, materials, detailing, etc. are impediments to be overcome in the achievement of philosophical statements and sculptural effects. For Kahn, as for Wright and Mies, structure, materials, and detailing are not impediments but the very vocabulary of architecture and the means by which the architect engages institutions and thereby the human condition.

Beyond addressing our Human Being as defined by Desire, the architect engages our being-in-the-world, not as an abstract state, but in terms of a time and a culture. For the architect as philosopher, there is no pure, abstract being-in-the-world, there is only being in this world, at this time, in these cultural and material circumstances.

**Arch 509P, Kahn & Venturi****Fall 2004**

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Three most interesting books you read in the past few years for school

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Three most interesting books you read in the past few years NOT for school

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Your three favorite movies

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Your three favorite music groups

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Web sites you most often visit

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particular interests in architecture

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particular interests outside of architecture

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