

Louis Kahn: The Power of Architecture

Exhibition at London Design Museum
London, UK, 9 July - 12 October 2014

Louis Kahn: The Power of Architecture is a consequent review and historic summary of Louis I. Kahn's life, 20 years after the last exhibition about him¹. This exhibition, compiling the main works and research projects of Kahn, is a full experience that allows the public to get to know the life of one of the most important American architects of the 20th century².

The starting point of the exhibition is a chronological list of projects (1926-1974) of Kahn, entailing his works as a design consultant, unbuilt and constructed projects as well as urban plans, publications and exhibition material, that reveal a professional life full of ups and downs.

The core of the exhibition is divided into six different topics: "City. Philadelphia as urban laboratory", "House. Regional planning", "Science. The world as structure", "Eternal present. Ruins and archetypes", "Grounding. Earth, water, wind, light" and "Group form. The logic of assembly". The first one, "City. Philadelphia as urban laboratory", is dedicated to the urban plans of the city where Kahn lived, studied and maintained his office. He was a pioneer with radical and visionary concepts for the reconstruction of the inner city of Philadelphia, with reasonable success in the construction of his ideas. Showing plans, perspective drawings and conceptual schemes, this part of the exhibition shows the dedication of Kahn to his own city's future.

Followed by "House. Regional planning", the public enter into a differently scaled realm of Kahn's architecture in Philadelphia, since all of his houses were constructed in and around the city. Study drawings with colors, schemes and annotations are revealed in this section, demonstrating the importance of the house for Kahn, and how he always has envisioned it as an institution. The exhibition also offers a unique opportunity to appreciate a partial true scale replica of the window ledge with a bench of the Norman and Doris Fisher House (1960-1967, Hatboro, USA).

From the houses, the exhibition continues to "Science. The world as structure" where one can assist to the Kahn's analogy between architecture and natural sciences. The public can find drawings of geometric

studies relating the structure of the building to science, with the ultimate result being the project (unbuilt) of the City Tower (designed in collaboration with Anne Tyng, 1952-1957, Philadelphia, USA) whose structure directly evokes the DNA formula. This part ends with the comparison between drawings and the timber models of the Alfred Newton Richards Medical Research and Biology Buildings (1957-1965, Philadelphia, USA), the Library and Dining Hall at Phillips Exeter Academy (1965-1972, New Hampshire, USA) and the Yale Center for British Art (1969-1977, New Haven, USA), where one can see the development of Kahn's new alternative ways of building with concrete.

Controlling concrete and receiving major commissions for significant projects promoted Kahn to the "Eternal present. Ruins and archetypes". With influence from Rome and its solid and timeless constructions, Kahn was able to endorse the meaningful mass and weight of architectural buildings such as Sher-e-Bangla Nagar (1962-1983, Dhaka, Bangladesh), Hurva Synagogue (1967-1974, Jerusalem, Israel), Indian Institute Management (1962-1974, Ahmedabad, India), Memorial to the Six Million Jewish Martyrs (1966-1972, New York, USA, unbuilt) or the Mikveh Israel

Synagogue (1961-1972, unbuilt, Philadelphia, USA). Kahn's clever use of concrete in each of his projects is well represented in this section through the use of different materials in models and drawings.

Apart from the aesthetics of the building, Kahn was also concerned with the elements that surround every construction, which led us to the "Grounding. Earth, water, wind, light" part, where we can find the best representative projects designed by him, related to nature. This is seen through his utilization of colorful expressive sketches of projects: The General Motors Exhibit at the 1964 World's Fair (1960-1961), the Salk Institute for Biological Studies (1959-1965, La Jolla, USA) and the Kimbell Art Museum (1966-1972, Fort Worth, USA).

The final segment, "Group form. The logic of assembly", closes the travelling around of Kahn's professional life with the understanding of the logic behind each building. Besides the factors already discussed, Kahn conceived space in various ways compared to the Modern Movement ideas, which created hierarchy within the overall form, distinguishing "servant" and "served" spaces, turning each building into a unique and varying experience for the individual. Taking into consideration the surrounding environment, timelessness and people, it results in the creation of exclusive ambiances whereby Kahn exposes the true materiality of concrete, timber and glass construction. The First Unitarian Church and School building (1959-1969, Rochester, USA), Fine Arts Center (1961-

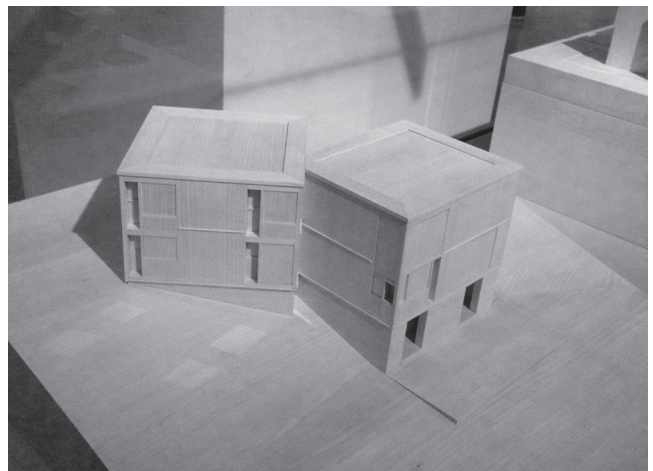
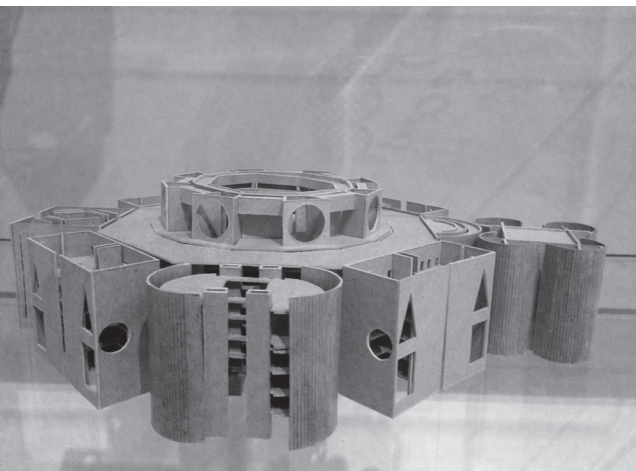
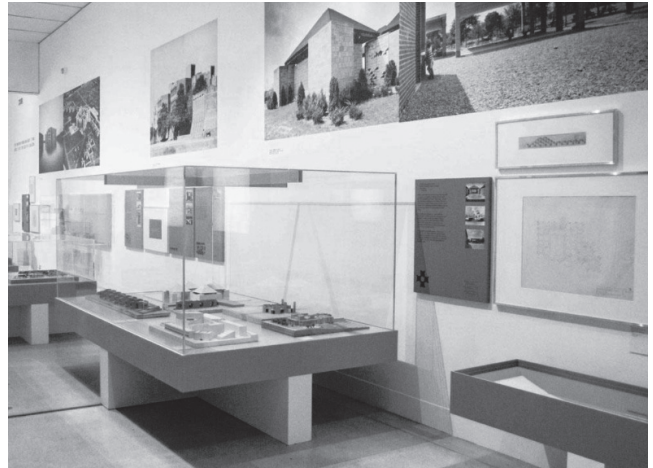


01 *Louis Kahn: The Power of Architecture*, London Design Museum, London, UK.

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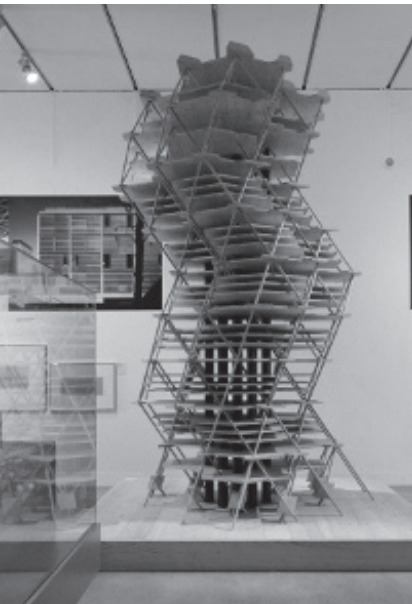


03 *Louis Kahn: The Power of Architecture* London Design Museum, London, uk.



04 *Louis Kahn: The Power of Architecture*, London Design Museum, London, uk.
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05 *Louis Kahn: The Power of Architecture*, London Design Museum, London, uk.
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1973, Fort Wayne, USA), Eleanor Donnelley Erdman Hall (1960-1965, Bryn Mawr, USA) and Jewish Community Center (1954-1959, New Jersey, USA) prove this.

The exhibition *Louis Kahn: The Power of Architecture* allows the public to understand each dimension of Kahn's work, concluding that each concern is connected to and belongs to a whole. The elements presented in the exhibition are able to give a general view of his method of designing, as well as an understanding of the powerful influence of each building without seeing them in person. All of this is complemented by a catalog³ that goes deeper into these themes, with essays justifying the importance of Kahn's work – the perfect complement to an inspiring and powerful exhibition.

Catarina Andrade

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Notes

- 1 *Louis I. Kahn: In the Realm of Architecture*. Curators: David B. Brownlee and David G. DeLong. Between 20 October 1991 and 1 February 1994, the exhibition was featured in the Philadelphia Museum of Art, the Centre Georges Pompidou (Paris), the Museum of Modern Art (New York), the Museum of Modern Art (Gunma), the Los Angeles County Museum of Art, the Kimbell Art Museum and the Wexner Center for the Arts (Ohio).
- 2 The exhibition is a cooperation between the Vitra Design Museum, the Architectural Archives of the University of Pennsylvania, Philadelphia, and the NAI part of The New Institute, Rotterdam. Between 7 September 2012 and 5 November 2017, the exhibition was at the NAI, the Vitra Design Museum, the Oslo National Museum, the London Design Museum, the Taipei Museum of Fine Art, the Bellevue Arts Museum, the San Diego Museum of Art, the Kimbell Art Museum and The Fabric Workshop and Museum in Philadelphia.
- 3 Mateo Kries, Jochen Eisenbrand, Stanislaus von Moos (ed.), *Louis Kahn – The Power of Architecture*, Weil am Rhein, Vitra Design Museum, 2013. See the Book Review section of this issue.

Plastic Components in Modern Buildings. Researchers and Practitioners Discussed History and Conservation at TU Delft

isc/Technology Seminar
TU Delft, the Netherlands, 23 October 2017

The degradation of plastic building components — and claddings in particular — is an increasing challenge in heritage buildings. Research and the development of appropriate strategies for the architectural conservation, restoration and replacement of synthetic building components is still in its infancy. This was reason enough to stage a one-day international seminar, *Plastics in Modern Movement Buildings. Conservation and (Re-)design of Synthetic Building Components* focusing on the exterior applications in the building envelope and as prefabricated elements. The seminar took place on October 23rd, 2017, at the Faculty of Architecture and the Built Environment at TU Delft, the Netherlands.

The event was organized in collaboration between the **docomomo** International Specialist Committee on Technology (isc/τ), **docomomo** Netherlands and the Section of Heritage & Architecture of TU Delft. The seminar brought together material scientists, art conservators, architectural historians, heritage specialists, designers, consultants and students. Wido Quist, hosting Chair of **docomomo** Netherlands, welcomed participants from ten different countries, and particularly the attending experts from the plastics industry, before introducing a range of Dutch

examples. He proposed the results of the meeting be published as the 14th **docomomo** *Preservation Technology Dossier*.

The morning session “Exploring the Field” was moderated by Uta Pottgiesser (UAntwerp), Chair of the isc/τ. She gave an overview of the aspects for consideration in the conservation and (re-)design of synthetic materials: “We will highlight the history and the impacts of petroleum-based materials: architecturally in aesthetic and constructive terms, globally and locally related to urban and economic development, and technically taking into account the chemistry, manufacturing and sustainability. It is important to develop strategies as an interdisciplinary approach.”

The architect Wessel de Jonge, TU Delft Chair of Heritage & Design, kicked off with an overview of synthetic building components since the early 20th century, referring to Anthony Walker’s seminal research of the 1990s. He explained how early thermoset and thermoplastic building materials were primarily fit for interior use. In order to promote the use of plastics several producers developed prototypes of single family houses, such as the Monsanto “House of the Future” in 1957.

In her talk on “Petroleumsapes”, Carola Hein, TU Delft Chair of History of Architecture and Urban Planning, showed how the international petroleum industry has been instrumental in the promotion of synthetic building materials in their search for new markets. Pointing at various social parameters such as the implications of the employment of women in the war industry, requiring efficiency in housekeeping and easy-to-clean materials, she claimed that the introduction of plastics was driven by stakeholders from the industry rather than by consumers and designers.

The conservation of plastics in art works was presented by Thea van Oosten, who has worked as a senior conservation scientist with the Dutch National Heritage Agency RCE. She has been involved in the conservation of many plastic art objects coping with various material configurations. She underlined the importance for the conservationist to have detailed information about the original manufacturing of the object, as this has a key impact on the material properties and specifications. Minor components such as gaskets and sealants can pose particular conservation challenges.

In the afternoon a series of case studies presented various conservation approaches, new synthetic components and work methods, mostly dealing with glassfiber reinforced polyester (GRP). Sami Supply, conservator in Helsinki, presented the preservation of two “Futuro” holiday homes of the 1960s, one preserved as an outdoor object and the other as an artefact for a museum in Rotterdam¹. The company Poly Products of Werkendam (NL)



01 The restored Futuro featuring serial number 001 resides in the outdoor collection of the WeeGee Museum in Espoo, close to Helsinki, Finland. © Wessel de Jonge.



02 Poly Products' director Jan Schrama show how it's made during the factory visit that was part of the seminar program. © Wessel de Jonge.

03 Benthem Crouwel Architekten, Stedelijk Museum extension, Amsterdam, The Netherlands, 2014. It features an innovative synthetic skin that is almost seamless. © Janne Linders.



05 Nio Architects, bus station, Hoofddorp, The Netherlands, 2003. The polyester skin was made on site by Poly Products. © Wessel de Jonge.

04 Architect Mels Crouwel during the seminar excursion, explaining the design challenges related to the 2014 extension of the Stedelijk Museum in Amsterdam. © Wessel de Jonge.



has been involved in the preservation of the latter, which is actually the first prototype. The firm's director Jan Schrama explained the manufacturing of plastics in practice and gave insights into the production processes in the factory that was visited the next day².

The conservation of the GPR façade panels of the Herman Miller Factory in Bath was the focus of research for Elyse Howell-Price of Nicholas Grimshaw architects (UK). Introducing a methodology for mapping anomalies and defects in the GPR components she underlined the importance of the orientation towards the sun and the impact of shading by neighboring buildings and trees. The project is aimed at the preservation of the panels rather than the replacement thereof³.

Pamela Voigt, conservation consultant with BAKU – *Bauen mit Kunststoffen* – in Germany, advocated her approach of "Saving Yesterday's Dreams". As a practicing architect in Leipzig she engaged herself with the refurbishment of some remaining copies of the Feierbach House, another late 1960s prototype of which five were actually produced. Her inspiring talk offered an insight in the careful way in which these structures have been repaired and polished by hand and brought back to life⁴.

The innovative synthetic building skin for the recent extension of the Amsterdam Stedelijk Museum was discussed by Mels Crouwel of Benthem Crouwel Architects. In the design phase much attention has been given to the future maintenance and preservation of the material qualities over time. A particular challenge has been how to deal with thermal expansion while the skin was designed to feature few dilatation joints⁵.

"The conference covered quite well how the rise and fall of plastics in modern buildings can be explained", concluded Wessel de Jonge after moderating the afternoon sessions. "After the mid-1970s oil crisis, plastics became expensive and most demonstration houses were taken off the market, while the use of plastics in buildings in general dropped as well. This explains why few such buildings survived and there is little experience with their preservation. The seminar covered a variety of aspects addressing 'resilience' both globally and in terms of urban, local and cultural development, as well as the technical and economical aspects. It was good to see how intensively designers, researchers and students exchanged knowledge and experiences on the topic."

The next day's excursion included a factory-visit to Poly Products at Werkendam; the

Hoofddorp bus station by Nio Architects, made by Poly Products (2003); Aldo van Eyck's 1960 Orphanage, restored by Wessel de Jonge Architects (2017); and the Amsterdam Stedelijk Museum Extension by Benthem Crouwel Architects for which Holland Composites supplied the synthetic finish (2014).

A second seminar on plastics in 20th century architecture will be organized on March 5th, 2018 at the University of Antwerp, Belgium, focusing on interior applications. Entitled *Plastics in Modern Movement Interiors. Conservation and (Re-)design of Synthetic Finishes, Furniture and Products*, it is a collaboration between **docomomo** Belgium and the **docomomo** ISCs on Interiors (ISC/I) and Technology (ISC/T).

Uta Pottgiesser and Wessel de Jonge

Notes

- 1 <https://www.kultuurriespoo.fi/en/node/906>.
- 2 www.polyproducts.nl.
- 3 <https://grimshaw.global/projects/herman-miller-factory>.
- 4 <http://kunststoffbauten.de/de>.
- 5 <http://benthemcrouwel.com>.