

Aalto through young Utzon's eyes: The role of Alvar Aalto in developing the maturity of Jørn Utzon's work

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Introduction

There is no doubt that the work of Alvar Aalto (1898-1976) played an important role in the maturity of architectural design of Jørn Utzon (1918-2008). Despite Utzon openly and repeatedly admitted his learning from Aalto, what was the interrelationship between these two master architects, what was Utzon's perception of Aalto's work and how Utzon interpreted the ideas and ideals received from Aalto's work, are all unknown and unheard.

By surveying the architectural collection both of Aalto and Utzon, this article reconstructs their communications in-between and reviews Utzon's study on Aalto's work through his own photography images and book collection, as well as building excursions. In addition, it constructs a series of analytical comparisons between the studied work of Aalto and Utzon's architectural creation. The found analogies in-between are served as the rationale for arguing Utzon's learning from Aalto. However, Utzon did not simply imitate the manners of Aalto, and Utzon seemed to interpret the received concepts from Aalto with his own beliefs and interests, as well as with other influences. Thus, the differences between the two master architects' implementations of shared concepts illuminate their distinct design approaches and intentions behind. Together, this delivers a way to re-access both of Aalto and Utzon's significant architectural thinking. This further provides a channel to access how the legacy of Aalto was disseminated and transformed especially seen in the maturity of Utzon's work.

Utzon's early encounter of Aalto

Utzon's first encounter with Aalto was at the Royal Danish Academy of Fine Art, while Aalto was delivering a guest lecture at the School of Architecture in the late 1930s. Aalto's lecture left a strong impression on Utzon and stimulated him to undertake study at Aalto's Viipuri Library, the Finnish Pavilions at the 1937 Paris World Exposition and the 1939 New York World's Fair with his own photo collection.ⁱ In 1945, Utzon became an employee at Aalto's office in Helsinki. Although Utzon only worked for Aalto for a very short period of time from October 25 to December 5, 1945, this important experience allowed Utzon to gain an insight into Aalto's work. This includes his further studies on-site at Villa Mairea (1937-1939), Sunila Pulp Mill, Housing, and Town Plan at Kotka (1936-1939), Paimio Sanatorium (1928-1933), Turun Sanomat newspaper offices (1928-1929) and Terrace housing at Kauttua (1938-1940).ⁱⁱ Meanwhile, at Aalto's office, Utzon was working on the plan for the Apartments at Vaasa (1944-1947) for

Aalto's client – Strömberg Company (**Figure 1**).ⁱⁱⁱ

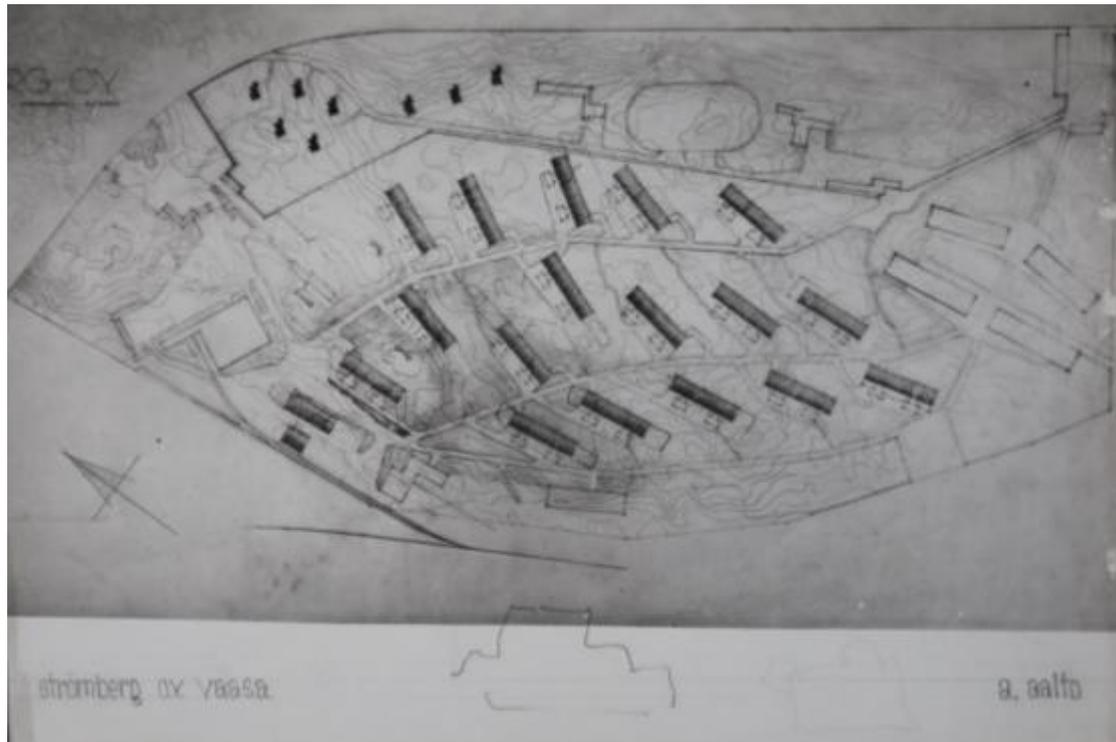


Figure 1 Utzon's photo collection of Aalto's plan for the Apartments at Vaasa for Strömberg Company. Jan Utzon's collection, Saunte, Denmark.

Utzon seemed to be deeply impressed by Aalto's work. After returning to Denmark, Utzon decided to write an article on Aalto in Danish journal *Byggeforum* in 1948.^{iv} For this task, Utzon wrote to Aalto in 1947 for requesting photographs on Aalto's housing schemes.^v Soon after, Utzon helped Aalto and the Museum of Decorative Art at Copenhagen to arrange the exhibition on their work opened on January 23rd, 1948.^{vi} Also in the same year, Richard Neutra (1892-1970) planned to visit the Nordic countries, Utzon and his Norwegian friend Arne Korsmo (1900-1968) suggested that Neutra should visit Finland and Aalto in which "Finland would be the most important country for him [Neutra] to visit if he wants to have the right image of Scandinavia".^{vii} In the late 1940s, Utzon seemed to act as an ambassador of Aalto in Denmark, and his letters to Aino and Alvar Aalto surviving in today's Alvar Aalto Museum seemed to prove his admiration of and friendship with the Aalto couple. Hence, these relationships demonstrate that, Utzon was pretty familiar with Aalto's work in great details.

Utzon's learning from Aalto could be later detected in Utzon's housing proposals in the late 1940s and the early 1950s. These unrealized proposals, including the 1947 housing proposal at Morocco (**Figure 2**), presented two important characteristics of young Utzon's architectural creations and indicated both the similarities and differences between his and Aalto's

architectural approaches. These proposals presented learned hierarchical and pragmatic concerns of planning with the radial and curved configuration from Aalto; additionally, Utzon translated the expressivity of metaphorical Nature from inspired planning principles into the proposed built forms in which the building structure was exaggerated more than that in Aalto's work.

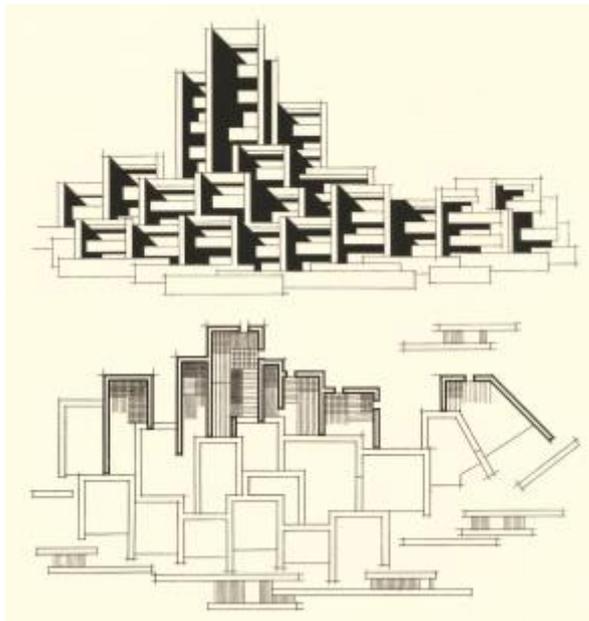


Figure 2 Utzon's 1947 housing proposal at Morocco. *The Utzon Archives*, Aalborg University Library.

Similar design intentions of Utzon could be detected in his chair design – *Grete* – for Modern Furniture Competition at the Museum of Modern Art, New York, USA, 1946 (**Figure 3**). Utzon's proposed bended plywood elements with their curvilinear shapes could be inspired by Aalto's furniture design but with a much more dramatized tectonic formation. Utzon's furniture design was presenting his articulation of organic shapes of elements, as well as their representative forms and composition, especially comparing how Aalto put his efforts to simplify the joins for production and to increase the comfort of sitting. There were two distinct artistic dimensions which made Utzon's furniture design contrasting with Aalto's. One was that Utzon's design was directly presenting the formation of organism and further representing the dynamism of its movement. This was different from Aalto's presentation of metaphorical Nature with his furniture details. The other was that Utzon's design was presenting a sense of classicism by applying the symmetric composition of forms within a square layout, as well as a sense of gravity by emphasizing the bearing and borne elements, which was different from Aalto's more practical and flexible approach in furniture design. These two specific characteristics seemed to predict the key features of Utzon's mature architectural creations.

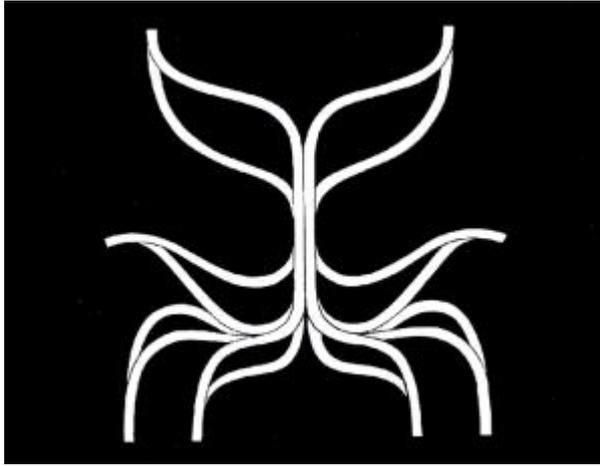


Figure 3 The representative elevation of Utzonre 1946 chair design - *Grete*, part of a joint submission with Norwegian architect Arne Korsmo for Modern Furniture Competition of The Museum of Modern Art, New York. *The Utzon Archives*, Aalborg University Library.

The influences of Aalto on Utzon's early career

After Utzon's short practice at Aalto's studio and before his working trip to Morocco in 1947, he came back to Copenhagen and established his joint architectural firm with his colleague – Tobias Faber (1915-2010). Together, these two young architects wrote their first manifesto – “Tendenser i Nutidens Arkitektur [Tendencies in present-day Architecture]”, published in *Arkitekten* in 1947.^{viii} In this statement, they rejected the outdated functionalist approach to design and refused to accept the historical style of architecture. They were searching for the “organic” building culture which was exemplified by the vernacular buildings around the world, such as Chinese architecture, works of Frank Lloyd Wright (1867-1959) and Alvar Aalto. In total, they presented 27 images. These images included Aalto's 1930 Turun Sanomat newspaper offices, 1936 Aalto Vase and 1939 Sunila Pulp Mill (1939).

These three images seem to confirm Utzon's perception of Aalto's work with three important concepts. Firstly, Utzon could reaffirm the aestheticism found in Aalto's organic forms in his creation as the criticism of outdated functionalist and historicist approach in design. Secondly, Utzon could appreciate the structural formation found in Aalto's architectural work as expressive and as practical for closely responding to the functional requirements of building. Eventually the third concept could be his impression by Aalto's experiments of varied structures and forms of reinforced concrete structure, especially after studying them on-site at Sunila.

Unfortunately, this joint publication was accused of plagiarism in which Faber and Utzon included 7 images from Swiss-born architect Albert Frey's (1903-1998) *In search of a living architecture* (1939) without a proper acknowledgment.^{ix} This forced Faber and Utzon abandoned the idea of establishing their joint office, and Utzon almost had no chance to receive any work due to the scandal at that time. Thus, Utzon wrote a letter to Aalto for requesting an

assistant position with Aalto at MIT in the United States.^x However, the answer from Aalto was negative, and Utzon stayed at Denmark and participated in few competitions which indicated the role of Aalto's work in Utzon's creation. For example, the mushroom columns inside Aalto's Turun Sanomat project and Wright's Johnson Wax laboratory tower both of which Utzon carefully studied both of them on-site, were served as the inspiration for his 1953 Langelinie Pavilion competition proposal – a “pagoda-like” multi-floor restaurant built on top of an urban-scale podium (**Figure 4**). To Utzon, the structural projections of pavilion provided the sitting areas without columns interrupting the view. Meanwhile, the load-bearing walls of pavilion shaping the central service core, directly connected the kitchen below the podium and they also minimized the distance with the sitting areas on each floor. Arguably, the inclined wooden screen inside Aalto's Savoy restaurant at Helsinki and the curved concave sculpture on the fireplace of Aalto's Villa Mairea seemed to further serve Utzon the ideas for enriching the interior design by expressing the metaphors of “Nature” within an iconic roof/earthwork juxtaposition.



Figure 4 Utzon's 1953 Langelinie Pavilion competition proposal. *The Utzon Archives*, Aalborg University Library.

In 1953, both Aalto and Utzon proposed their courtyard houses, namely, the Experimental Summer House at Muuratsalo by Aalto; and Utzon's low-cost housing scheme for the Skanska Hustyper competition in Scania, Sweden. The former proposal conceived the courtyard as the front court that acted as a mediator between the house and its natural surroundings; the latter treated the courtyard as a central core of the whole house fully protected by the surrounding walls (**Figure 5**). Although, Utzon did not have a chance to realize his idea immediately, this

proposal showed the seed for continuous development of his concept. In 1957, Utzon's most notable courtyard housing scheme was realized as the Kingo Houses at Helsingor. Compared with his Skanska scheme, Utzon embodied the Kingo project with a paved court and heightened load-bearing brick walls to increase the houses' monumentality and sense of stability. Arguably, the elaborative brickwork of Aalto's Muuratsalo project could inspire Utzon's Kingo Houses. Utzon might sense the similarity between the two projects, and sent his photograph taken at the oasis village at the Atlas Mountains in Morocco to Aalto for indicating his "another" inspiration for design.^{xi}



Figure 5 Utzon's Skanska Hustyper competition for low-cost housing in Scania. *The Utzon Archives*, Aalborg University Library.

The Main Building of Helsinki University of Technology (TKK) and the Sydney Opera House (SOH)

Today's surviving collection of Utzon suggests that the architect had studied Aalto's TKK project with its related publications and his own camera on-site. This seems to explain the similarity between the main building of Aalto's Helsinki University of Technology (TKK) design (1949-1966) and Utzon's most notable project - the Sydney Opera House (1957-1966). What Utzon perceived from Aalto's design could be that the main building of TKK was carefully incorporated into the landscape and the auditorium rooms were standing on top of a gentle hill with a symbolic urban-scale podium. Meanwhile, the inclined volume of main building represented the geographic condition of site, and both of the outdoor and indoor amphitheatres presented a fusion between natural landscape and ancient human culture. This could be seen as the precedent of Utzon's Opera House podium and its amphitheatres for its two Main Halls, which became part of the site and emphasized the characters of the site - the Bennelong Point (**Figure 6**). Moreover, the two projects presented high level of similarity in their processional sequence and spatial organization. In both cases, visitors could continuously climb the staircases until reaching the auditorium rooms and then start to descent inside the

amphitheaters. This dramatized sequence was emphasized by the rational arrangement of functionality inside the building, where the more private and serving spaces were located on the lower floors, and the more public and served spaces were on the higher floors.



Figure 6 Utzon's 1962 model showing the iconic roof/earthwork juxtaposition of the Sydney Opera House and its finalized shell-vault structure of roof forms. *The Utzon Archives*, Aalborg University Library.

Although the two master architects almost shared the same principle of spatial organization, Utzon's Sydney Opera House design still presented several distinct characters which were very different from Aalto's TKK main building. Basically, Utzon's design proposal could be divided into 4 parts: the podium, roof, glass mullions and acoustic ceilings. Each part had its own specific structural system, materials and geometric principle. For instance, the podium was constructed by in situ concrete and the roof was by precast concrete with tensile strength of cables. During the design process, Utzon seemed to be inspired by Chinese architecture, especially by studying the 1925 edition - *Chinese Building Standard - Yingzao fashi*.^{xiii} To Utzon, Chinese architecture presented a monumental juxtaposition of roof and earthwork where the curved floating roof mega structure was in contrast with the solid angular urban-scale podium. To Utzon, rhetorically, the columns were all invisible and unimportant in Chinese building culture, and he made his Opera House inside out with the unique structural systems. This was very different from Aalto's emphasis on the monumentality of his design by articulating the walls and columns within the post and beam construction, as well as the uniformity of geometric system between roof forms and floors. Moreover, Utzon's realized Opera House roof forms were presenting the expressivity of structural rigor and tectonic formation with heavy grandeur and pompous gravity, contrasting with Aalto's sophisticated unification of interior embellishment making ceiling with fused roof forms and walls. The differences between Aalto and Utzon's design intention and principles could be further detected in their projects in

Denmark, namely, Aalto's competition for a funeral chapel in Lyngby Taarbaek in 1952 and Utzon's Bagsværd Church (1968-76) (Figure 7).

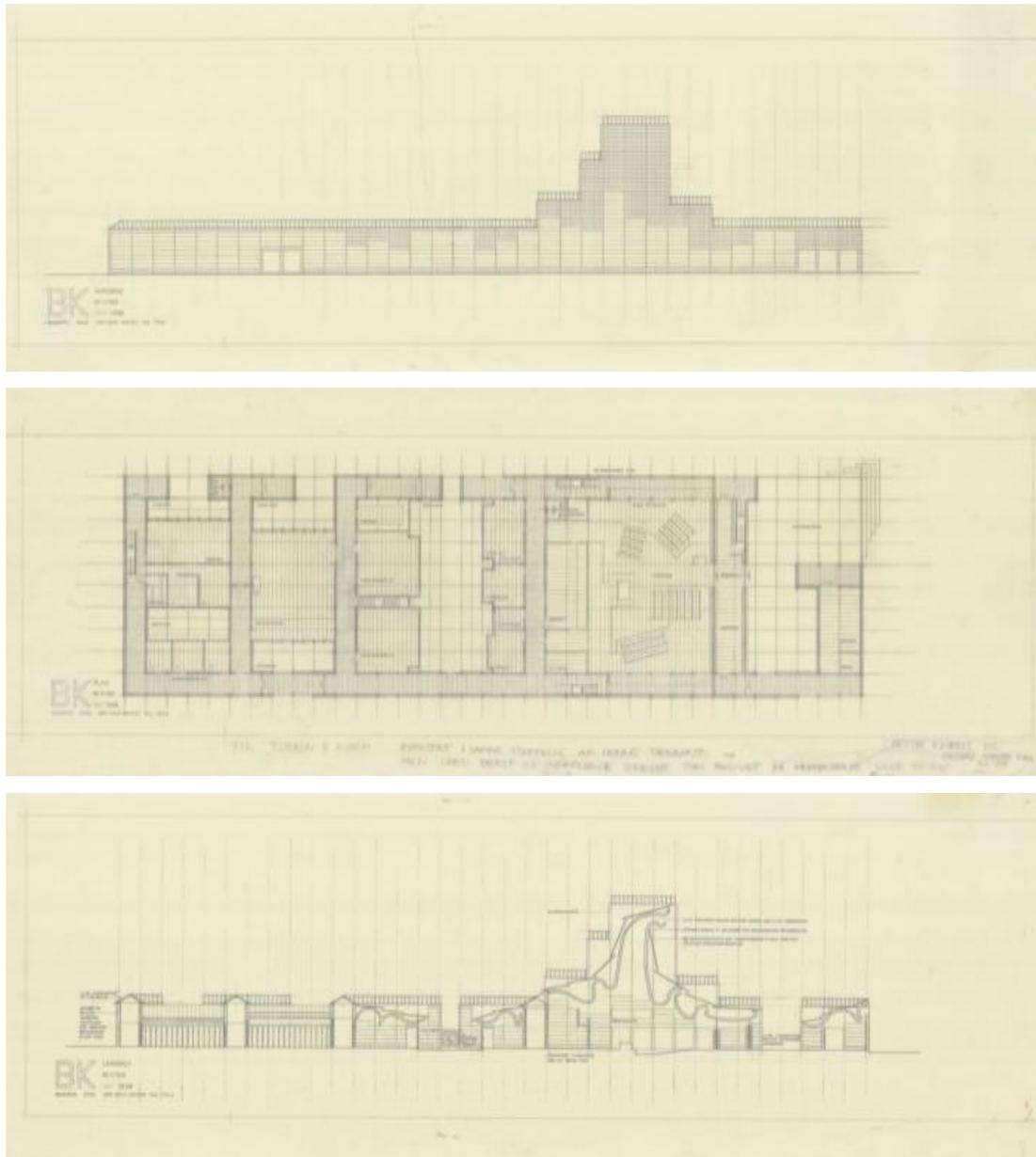


Figure 7 Utzon's early study of Bagsværd Church design showing his organization and articulation of representative roof forms to express their architectonic expressivity and flexibility by reducing all the columns in its major rooms. *The Utzon Archives*, Aalborg University Library.

Both the two projects were delivered as walled complexes within a rectangular building footprint where the main entrance was located at the short front. Inside the both complexes, the courts were interconnecting varied rooms which were embodied with distinct roof forms. Unlike Aalto's design approach, Utzon formulated the roof form of his church with in situ concrete shell structure with 22 metre span in contrast with the prefabricated concrete pillars

and panels for constructing the walls and floors below. Utzon's two distinct architectonic formation were further dramatized by their geometric principles: namely, the turning cylindrical forms shaping the waves of shell roofs in contrast with the grid system seen from the walls and floors. Once again, Utzon's design intention could be referred to his study on Chinese architecture - a monumental roof/earthwork juxtaposition with intensive articulation of structural formations. This was a significant factor which allowed Utzon distance, in his church design, away from Aalto's influences.

Helsinki City Plan and "Platforms and Plateaus"

In 1962, after studying Aalto's Helsinki City Plan, Utzon launched his "Platforms and Plateaus" manifesto, as his retrospective manifesto of his Sydney Opera House design.^{xiii} This was Utzon's statement for arguing that the proposed urban-scale platform or plateau could recreate open spaces for pedestrians above the ground and for cars on the ground in the center of traffic-congested European cities. Utzon seemed to fully agree with Aalto that the verticality of the proposed mega structures was the key to separate the circulation of pedestrians from cars and to accommodate mass parking spaces below. Although Aalto's Helsinki City Plan and most of Utzon's "Platforms and Plateaus" schemes were never realized, the shared concepts between these two architects could still be seen in the urban-scale platform in today's Finlandia Hall and the yet to be finished Sydney Opera House.

Comparing with Aalto's approach, Utzon's "Platforms and Plateaus" concepts focused more on the monumentality of built forms and processional movement of human beings within an iconic roof/earthwork juxtaposition, inspired by studied Chinese and Japanese architecture. What Utzon learned from Japan and China was that the monumental building complexes in East Asia were composed as a path-like monument which included a series of representative staircases, courts and main halls interconnecting with each other for shaping a ceremonial processional process along the central axis of a symmetric building footprint (**Figure 8**). This made Utzon's "Platforms and Plateaus" projects presenting a sophisticated transitional process from outdoor to indoor, from public domain in the front to the private areas in the back, served by the corridors on two lateral sides. Utzon's articulation of hierarchical composition of spaces and forms within his iconic roof/earthwork juxtaposition was very different from Aalto's approach. Aalto seemed to divide the spaces into two areas where the enclosed, private and serving area were shaped as contrasting components to the open, public and served areas. The former one was embodied with angular forms and symmetric layouts for required functionality; and the later one was implemented as organic shapes and asymmetric layouts for emphasizing the turning of processional movement.

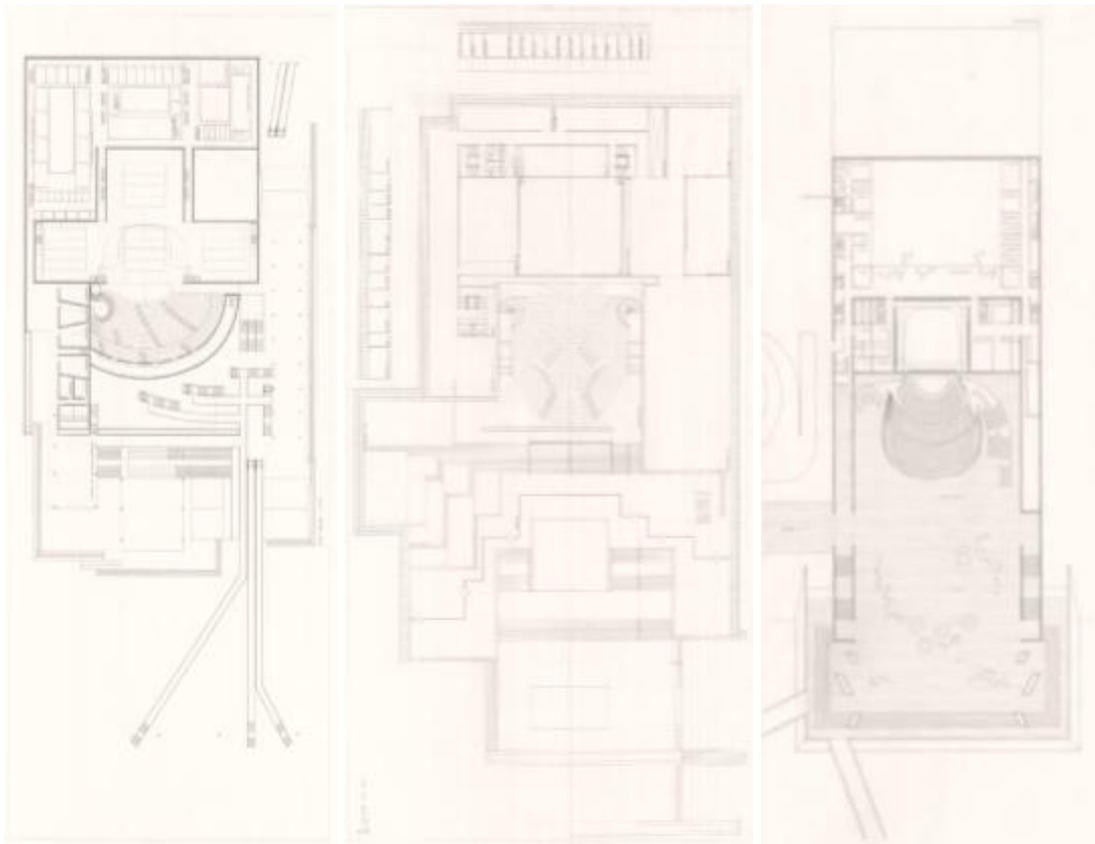


Figure 8 Utzon's proposal for the Opera in Madrid (1962, left), Zurich Theater (1964-1970, middle) and Wolfsburg Theatre (1965, right), showing the buildings were shaped with a narrow front and a long depth by surrounding walls and an urban-scale. *The Utzon Archives*, Aalborg University Library.

Two different Approaches

Since the late 1960s, Utzon started to focus on the design of building elements and articulation of their composition as the fundamental expression of his architecture, due to the complexity and difficulties faced during his Sydney Opera House project. This made Utzon publishing his 1970 "Additive Architecture" manifesto as his statement for searching inspiration from Nature and exotic building cultures, such as Japanese and Chinese architecture, to synthesize his architecture creation with inspired standardization and modulization of structural elements for conducting the flexibility and expressivity of building compositions and layouts.^{xiv} Among the projects Utzon published, the Expansiva housing system (1969) could be the most interesting one in which it clearly presented the ideas received from Japanese architecture, especially from Tetsuro Yoshida's 1935 *Das Japanische Wohnhaus* (*The Japanese House*) (Figure 9).

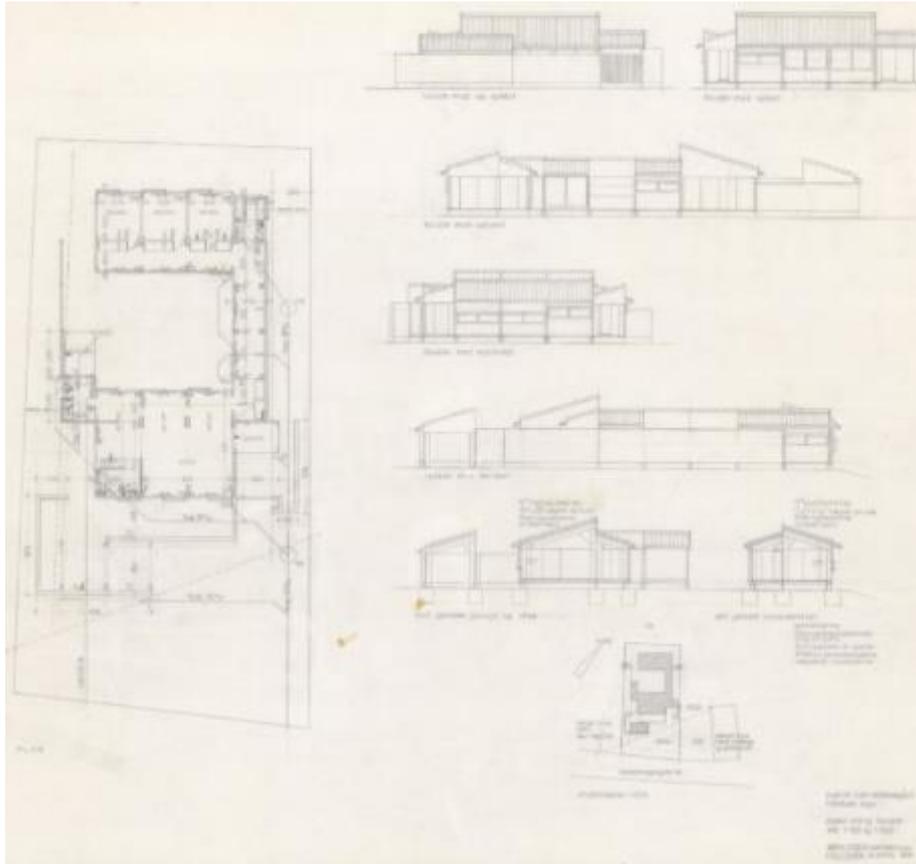


Figure 9 Utzon's Expansiva housing system (1969) and its exemplification of one house at Hellebæk for his daughter Lin Utzon. *The Utzon Archives*, Aalborg University Library.

Interestingly, Aalto also presented his interest in Japanese architecture, especially by reading Yoshida's book.^{xv} However, Aalto seemed to perceive Japanese architecture as a synthetic combination between built forms, interior design, gardening by applying varied natural materials for caring of the human senses and satisfying both the physical and psychological needs of human beings. This was very different from Utzon's structuralist and totalitarian interpretation of Japanese architecture. Utzon's Expansiva housing system was much more emphasizing the expressivity of prefabricated elements for building structure and membrane, and the constructed houses were literally without interior. Utzon's housing design presented a playfulness of structural system and building composition with representative elements from mass production, and this made his design approach very different from Aalto's work.

In the late 1970s, Utzon's National Assembly of Kuwait, could be seen as his exemplification of the monumentality and hierarchy of Chinese architecture by articulating the prefabricated concrete units and their on-site assembly (**Figure 10**). Utzon intended to present the expressivity of proposed city-like building complex with inspired aesthetic principles: the bigger rooms were conducted by larger and more expressive pre-casted concrete units which

composed a more expressive roof forms, also seen in the Forbidden City of Imperial Beijing.^{xvi} Showing the real structure and its applied technology and building process was Utzon's design principle, and this was ever became the theme of Aalto's mature work. Utzon's deep understanding of Aalto's design seemed to become one of the reasons for his "additive" design principle which distinguished his mature work from the influences of Aalto.

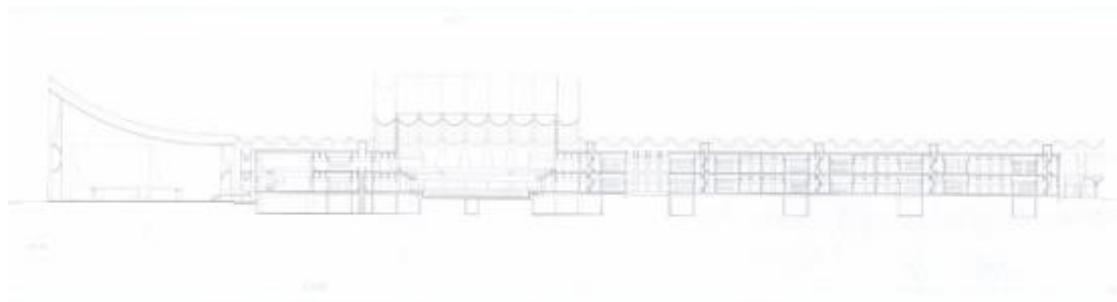


Figure 10 Utzon's early design proposal for the National Assembly of Kuwait. *The Utzon Archives*, Aalborg University Library.

Conclusion

Utzon's relationship with Aalto seemed to prove his understanding and admiration of Aalto's work. Utzon's publications and creations further suggested his learning from Aalto who could play an important role in young Utzon's architectural career in teaching him to express metaphorical Nature by articulating materials, built forms and spaces with sensitive care of human senses. However, Utzon's early work also presented two distinct characteristics compared with Aalto's work: one was Utzon's built-form analogies with the historical monuments of none-European building cultures; the other was the building structures were emphasized as part of expressivity of natural metaphor. The similarities and differences between the two architects' creations could be clearly exemplified in the comparisons between the main building of TKK and the SOH, or the funeral chapel at Lyngby Taarbaek and Bagsværd Church.

The complexity and difficulties of the SOH project seemed to stimulate Utzon to pursuit the hierarchical and expressive built forms and spaces with the emphasis on the structural formation and composition in the late 1960s and 1970s. Utzon's "Platforms and Plateaus" theme could be seen as the architect's dualistic design approach in term of the floating and curvilinear roof megastructure being in contrast with the solid and angular urban-scale podium in the 1960s. Utzon's "Additive Architecture" theme could be seen as his search for the uniformity and monumentality exemplified by the proposed structure and its construction in the 1970s. Utzon's deep understanding of Aalto's work presenting the mastery of fusion of

interior, built forms and landscape could help him pave the ground of his own distinctive design approach.

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- ⁱ Utzon's own photographs on Aalto's work are surviving in his son Jan Utzon's collection in Denmark.
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- ⁱⁱⁱ Utzon took his own photographs on his working drawings for Aalto, Tobias Faber interview, Copenhagen, 2009.
- ^{iv} See Utzon's letter to Aalto, dated 22 October 1948, Alvar Aalto Museum.
- ^v See Utzon's letter to Aalto, dated 22 October 1948, Alvar Aalto Museum.
- ^{vi} This exhibition was the most comprehensive one of Aino and Aalto's work to celebrate the 25th anniversary of their collaboration, see Alvar Aalto, *The Complete Catalogue of Architecture, Design and Art*, Goran Schildt, Academy Editions, 1994, p.300.
- ^{vii} See Utzon's letter to Aalto, dated 22 October 1948, Alvar Aalto Museum.
- ^{viii} Faber, T. and Utzon, J., 1947. "Tendenser i nutidens arkitektur". *Arkitekten*. 7(9), pp.63-69
- ^{ix} See CHIU Chen-Yu, "Transcultural intention and exotic inspirations: The role of Albert Frey in the work of Jørn Utzon" in *the 25th International Conference of the Society of Architectural Historians Australia and New Zealand (SAHANZ)*, Geelong, 2008.
- ^x See Utzon's letter to Aalto, dated 14 August 1947, Alvar Aalto Museum.
- ^{xi} AAA 10902-2 and -3, the collection of Alvar Aalto Museum.
- ^{xii} See CHIU Chen-Yu, "CHINA RECEIVES UTZON: The role of Jørn Utzon's 1958 study trip to China in his architectural maturity", *Architectural Histories - Journal of the European Architectural History Network (EAHN)*.
- ^{xiii} See Utzon, J., 1962. "Platforms and Plateaus: Ideas of a Danish architect". *Zodiac* 10.
- ^{xiv} Utzon, J., 1970. "Additive arkitektur [Additive architecture]". *Arkitektur*: 1-48.
- ^{xv} See CHIU Chen-Yu, Aino Niskanen and SONG Ke, "Humanizing Modern Architecture: The role of Das Japanische Wohnhaus in Alvar Aalto's design for his own house and studio in Riihitie", *Journal of Asian Architecture and Building Engineering*.
- ^{xvi} See CHIU Chen-Yu, "CHINA RECEIVES UTZON: The role of Jørn Utzon's 1958 study trip to China in his architectural maturity", *Architectural Histories - Journal of the European Architectural History Network (EAHN)*.