

Third Generation of Modern Architecture and Contemporary Spanish Architecture.

Jørn Utzon's Legacy

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Introduction

Jørn Utzon has had a significant influence upon contemporary architecture across the world, and his legacy has inspired many outstanding contemporary architects, particularly in Australia, Denmark and Spain. While Alvar Aalto is considered to be at the forefront of the Second Generation of modern architects, who responded to the orthodoxy of the Modern Movement and the earlier interpretation of functionalism in a humanistic-oriented architecture,¹ Utzon is the central figure of the “Third Generation of modern architecture in the 20th century,” who reacted against the dogmas of modern architecture altogether, leading it into “a new phase of criticism, renewal and maturity.”² As Christian Norberg-Schulz writes, “the First Generation of modern architects liberated space, the Second returned things to us, and the Third, with Utzon as the protagonist, has united it all as a down-to earth expression. In this way he has opened up the way for the future generations of the new tradition.”³

Sigfried Giedion also considered that the Danish architect Jørn Utzon typifies the Third Generation.⁴ The fifth edition of *Space, Time and Architecture* (1967) includes a list of attitudes in order to differentiate the Third Generation from the early phases of Modern Movement: the social orientation; open-ended planning with the incorporation of changing conditions; greater carefulness in handling the existing situation and an emphasis upon the architectural use of horizontal planes and platforms; a stronger relation to the past expressed in the sense of a desire for continuity and finally the right of expression above pure function.⁵ To Sigfried Giedion, this “new chapter in contemporary architecture”⁶ was opened by the work of Jørn Utzon.

International journals such as *Zodiac* turned the architecture of Jørn Utzon into a fixed reference in the Spanish architecture. As Christian Norberg-Schulz pointed out, with his regional and universal work, “Utzon gave Modern Architecture a new dimension. Today his lesson unfortunately seems to have been forgotten by most people.”⁷ However, in Spain,

1 Antón Capitel, “The Third Generation, or some of the Swan Songs of the Modern Movement,” *ZARCH* 10 (2018): 29.

2 Philip Drew, *Third Generation. The changing Meaning in Architecture* (London: Pall Mall Press, 1972): 3,7. Philip Drew is also the author of *The Masterpiece: Jørn Utzon. A secret life* (South Yarra, Victoria: Hardie Grant Books, 1999) and *Sydney Opera House. Jørn Utzon* (London: Phaidon, 1995).

3 Christian Norberg-Schulz, “Jørn Utzon and the ‘New Tradition,’” in *Utzon and the new tradition* (Copenhagen: The Danish Architectural Press, 2005), 258.

4 Sigfried Giedion, “Jørn Utzon and the Third Generation,” *Zodiac* 14 (1965): 36-47.

5 Sigfried Giedion, *Space, Time and Architecture, the Growth of a New Tradition* (Cambridge: Harvard University Press, 1967).

6 *Ibid.*, 689.

7 Norberg-Schulz, “Jørn Utzon and the ‘New Tradition,’” 258.

Utzon's work seems closer and more relevant than ever,⁸ as it has inspired many outstanding contemporary architects, such as Francisco Javier Sáenz de Oiza, Antonio Fernández Alba, Rafael Moneo, Alberto Campo Baeza, Carlos Ferrater, Nieto & Sobejano, Mansilla + Tuñón, and RCR Arquitectes. Utzon is a continuous inspiration for the architects and students of architecture, which can be traced in the way they work and express themselves, thus proving what William J. R. Curtis wrote, that "his magical inventions are liable to inspire people for a long time to come."⁹ Nordic architecture became a constant reference in the Spanish architecture of the 1950s, at first through international journals, and later through architects' travels.¹⁰ The most outstanding architects of the Madrid School¹¹ and the Barcelona School¹²

8 Jaime J. Ferrer Forés and Noelia Cervero Sánchez, "Centenaries of the Third Generation," *ZARCH* 10 (2018): 2-5.

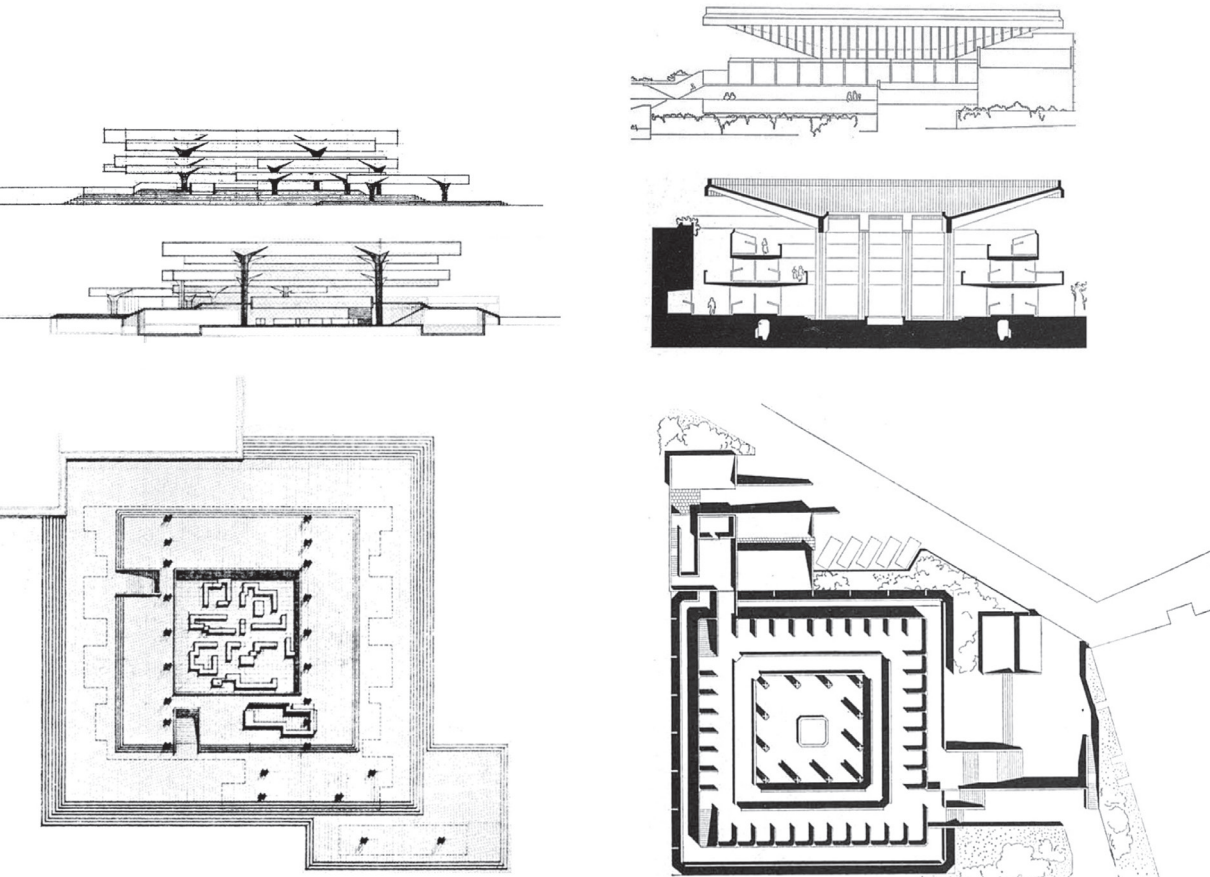
9 William J. R. Curtis, "The substance of architectural ideas: Jørn Utzon," *Arkitektur* 1 (2009): 6.

10 Jaime J. Ferrer Forés, "La arquitectura nórdica a través de las revistas españolas" ["Nordic Architecture Through Spanish Journals"], in *Las revistas de arquitectura (1900-1975): crónicas, manifiestos, propaganda*, ed. José Manuel Pozo et al. (Pamplona: T6 Universidad de Navarra, 2012): 475-482.

11 Juan Daniel Fullaondo, "La Escuela de Madrid" [The Madrid School], *Arquitectura* 118 (1968): 11-23.

12 Oriol Bohigas, "Una posible Escuela de Barcelona" [A Possible School of Barcelona], *Arquitectura* 118 (1968): 24-30.

Fig. 1: Jørn Utzon. Market in Elineberg, 1960 | Rafael Moneo. Competition entry for the market in Cáceres, 1962



developed a modern organicism associated with the ideas of Bruno Zevi and the inspiration from the work of Frank Lloyd Wright and Nordic neo-empiricism.¹³ Several projects began to adopt an abstract language moderated by climate and urban environment with the Mediterranean modernity of works by Coderch or Antonio Bonet Castellana. This realist modernity materialized some remarkable works during the sixties with the incipient political openness and the stylistic mutations from rationalism to a mature modernity.

During the sixties and seventies, economic prosperity and touristic development gave way to the progressive modernization of Spain, with the boom of industrialization and urbanization. Two architectural trends coexisted: an idealistic approach, a trend derived from rationalism and modern technology, and a realistic attitude close to the nature of materials that later evolved into Brutalism with the strong constructive expressiveness using reinforced concrete.

Considering this context, the paper attempts to approach Utzon's influence on Spanish architecture by analyzing the various influences, from formal analogies to the more subtle reinterpretations of his legacy. The key figure is Rafael Moneo, who worked in Utzon's office in Denmark, thus gaining thorough knowledge of his work, way beyond the catalog of projects. Moneo tried to apprehend his lessons and reinterpret them, which is why the reference to Utzon is never literal in his own work. Other architects, however, introduced and explicitly used formal features of Jørn Utzon's architecture, proving their interest in his works but often repeating formal gestures.

Place and Culture: Rafael Moneo

Rafael Moneo (1937) obtained his architectural degree in 1961, and worked as a student, from 1958 to 1961 with Francisco Javier Sáenz de Oiza and later on, from 1961 to 1962 in Hellebæk with Jørn Utzon.¹⁴ Here, he had a close view of Utzon's approach, carefully assimilating and fusing already existing techniques or formal inventions into his personal synthesis. Utzon filtered the natural forms, structures and details derived from vernacular buildings and constructive tradition as sources of inspiration,¹⁵ as stated in the quote of the jury for the 2003 Pritzker Architecture Prize, given to Jørn Utzon: "He rightly joins the handful of modernists who have shaped the past century with buildings of timeless and enduring quality."¹⁶ Utzon's work emphasizes his appreciation for nature and his capacity to read the context with a respectful insertion in the environment as a result of the awareness of the territory.

Moneo's first project developed after he worked at Jørn Utzon's office in Hellebæk was a competition proposal for a Market in Cáceres (1962), which won the second prize. Moneo's competition proposal, with the slender elegance of his *impluvium* floating roof and the sculptural opulence of his straight-line platforms rooted in its context, is characterized by the opposition between the bold concrete forms of the platforms and the lyrical gestures of the floating roofs which recall Utzon's project for a market in Elineberg (1960). (Fig.1)

His early organicism and sensitivity for the urban context was shown in his proposal for a Broadcasting Station at El Obradoiro Square in Santiago de Compostela (1962) with a delicate exercise of repetition and variation combining pieces of different sizes in an orchestrated articulation whose shifting profile effortlessly integrates the building in the fragmented landscape of the Obradorio and recalls Utzon competition project for the

13 Gabriel Ruiz Cabrero, *El Moderno en España: Arquitectura 1948-2000* (Sevilla: Tanais Ediciones): 43-52.

14 Rafael Moneo (Tudela, 1937), architect and Professor at Barcelona School of Architecture, Madrid and Harvard. Rafael Moneo worked in Francisco Javier Sáenz de Oiza and Jørn Utzon offices in the early sixties. Pritzker Prize, 1996.

15 Kenneth Frampton, "Jørn Utzon: Transcultural Form and the Tectonic Metaphor," in *Studies in Tectonic Culture. The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, ed. John Cava (Cambridge, Mass: MIT Press, 1996), 247-298.

16 <https://www.pritzkerprize.com/laureates/2003>, last accessed Sept 24, 2019.

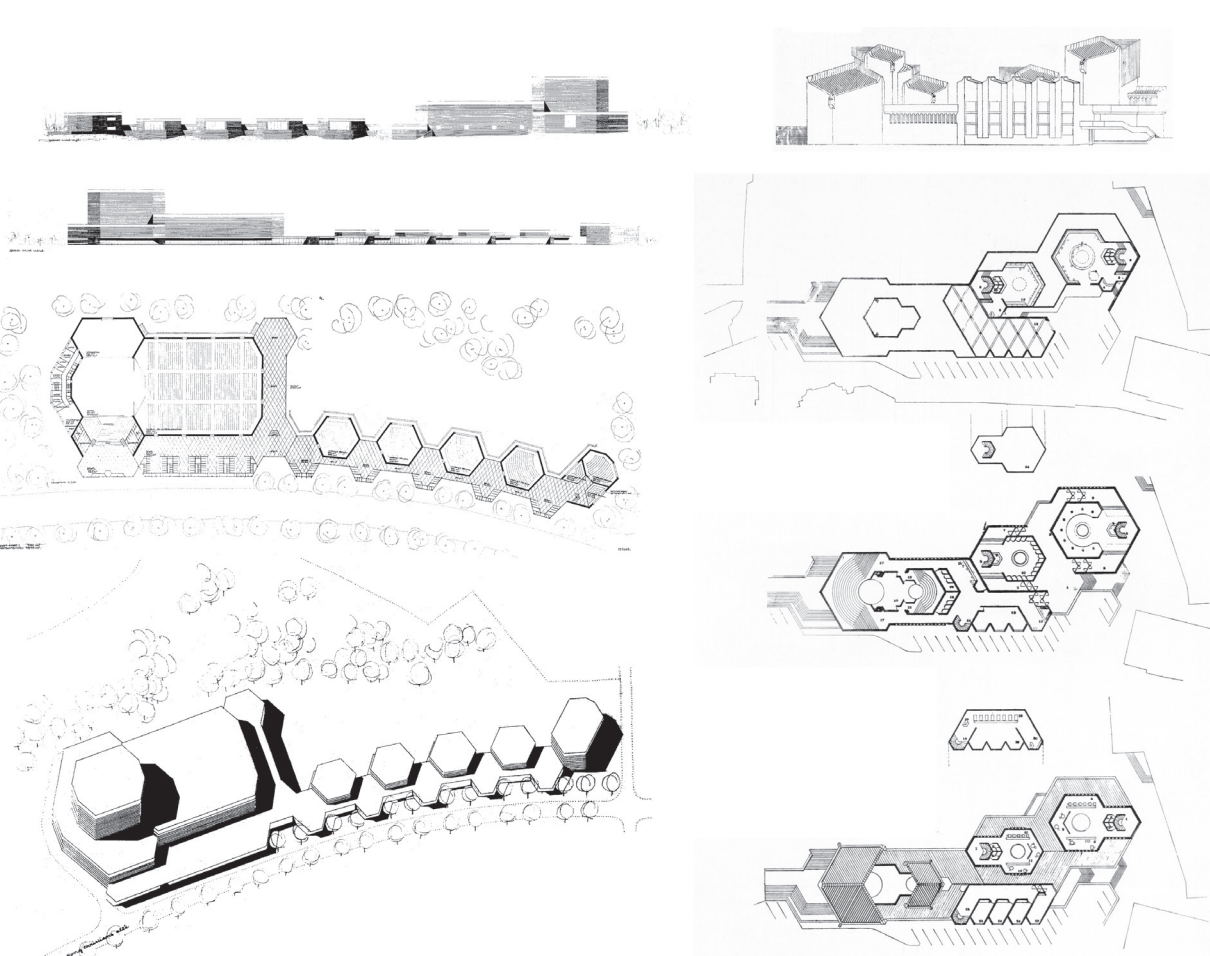


Fig. 2: Jørn Utzon. Aalborg Convention Center, 1945 | Rafael Moneo. Project for a building at Obradorio Square, Santiago de Compostela, 1962

Aalborg Convention Centre (1945). Professor Luis Moya, one of the jurors for the prize, wrote: “The architecture that Moneo designed seemed older than the pre-existing architecture in the square.”¹⁷ With this project, Moneo obtained a fellowship at the Spanish Academy in Rome (1963-1965), where he designed his organic competition proposal for the Madrid Opera House (1964). The sculptural expressiveness of the proposal was clearly inspired by Aalto and equally touched by the work of Utzon. (Fig. 2)

Filtered by a personal expressivity, his initial organic sensitivity gave way to a personal language emphasizing the site’s conditions and tectonic form, exemplified by works such as the Bankinter offices in Madrid (1972-1977), the Museum of Roman Art in Mérida (1980-1986) or the Kursaal in San Sebastian (1990-1999).¹⁸ To Rafael Moneo, architecture emerges from the place and program in an intense design process. Inserted in the fabric of the city and imbued with the spirit of the site’s conditions, Moneo’s project for the Souks of Beirut (1996-2009) provides an organizing structure arranged longitudinally, in a serial form with the presence of skylights, which echoes traditional Islamic architecture.¹⁹ His urban design approach provides a dense network of spaces that retain the urban characteristics of the place connecting the streets to the Souks. (Fig. 3)

17 Rafael Moneo, “Anteproyecto de edificio destinado a centro emisor en la Plaza del Obradoiro. Premio de Roma,” *Arquitectura* 50 (1963): 19-22.

18 Rafael Moneo, *Rafael Moneo: 1967-2004 Imperative anthology*, *El Croquis* 20+64+98 (2004).

19 *Ibid.*, 480-483.

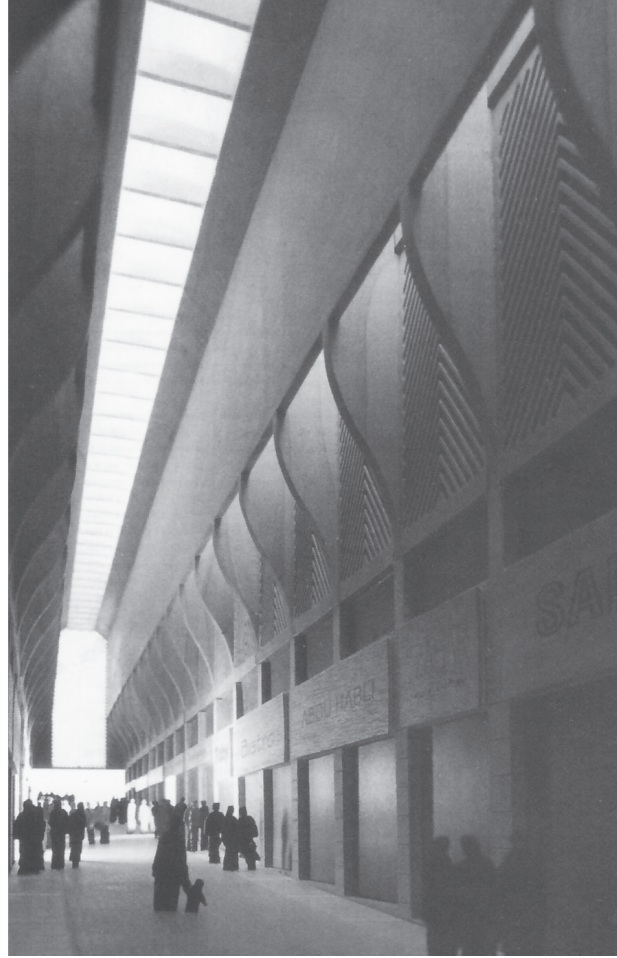
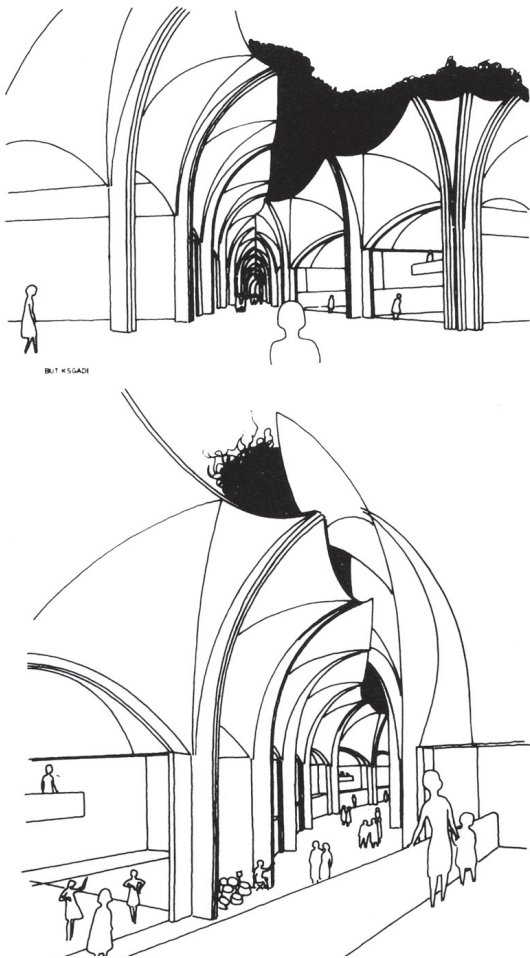


Fig. 3: Jorn Utzon. Farum town centre, 1966 | Rafael Moneo. Souks of Beirut, 1996-2009

Moneo's proposal recalls Utzon's competition project for Farum town centre (1966), which was also inspired by Islamic bazaars. Utzon conceived his proposal by the addition of different units around a central spinal column whose significant characteristics evoke the tradition of the Islamic bazaars. Utzon's work combines the construction with both the elements of modernity and the timeless eloquence of anonymous or historic architectures learned in his travels. As Rafael Moneo recalled: "traveling, gaining knowledge about other cities and cultures is a continuous lesson for architects, who will broaden the horizons of their work and at the same time verify the universal condition of the discipline."²⁰ The scheme was designed to grow by the addition of a set of parts capable of generating the structure of the complexes to be built using a geometrically flexible system of precast concrete components, growing by means of cellular addition along a spine giving access to shop units. His Stockholm Museum of Modern Art (1991) is also a project based on repetition and variation and another example of a sensitive response to the site. The hall with a pyramid ceiling and skylight is repeated in groupings combining different shapes and sizes generating a continuous and varied profile very much in harmony with the landscape of Skeppsholmen Island.²¹

Throughout the slow and patient search for the architectural project, Rafael Moneo elaborated on Utzon's approach and combined it with other influences. Moneo's work flows from the organicism of his first projects to the composition and abstract aggregation of his latest designs, submitting his personal expression to the characteristics of place and program.

20 Rafael Moneo, *International Portfolio 1985-2012* (Stuttgart: Axel Menges, 2013), 11.

21 Rafael Moneo, *Remarks on 21 Works* (New York: The Monacelli Press, 2010), 417.

Platforms: Antonio Fernández Alba, Rafael Moneo, and Alberto Campo Baeza

Utzon materialized the lyrical essence of his architectural research in feats like the platform crowned by a canopy of light roofs.²² Most of his proposals of this period are characterized by large platforms and a determination to define public and symbolic places by means of floating roofs that engage in a dialogue with the landscape.²³ As Kenneth Frampton wrote, the earthwork acts as “a necessary landform capable of integrating a structure into the surface of the earth.”²⁴ The bold concrete forms of the platforms and the lyrical gestures of the shells are conceived from a recognizable section, understanding the buildings as part of the territory, with the characteristic modern ambition of blending architecture and nature. The platform is a characteristic feature of Utzon’s architecture, and the contrast between the *stereotomic* and massive platform and the free curvature of the roof is also distinctive of his design talent.

A few Spanish architects have used the platform to build the site by developing Utzon’s building notion as an artificial landscape. Antonio Fernández Alba (1927) laid the platform out in a manner that might well be directly indebted to Utzon.²⁵ In his proposal for the Madrid Opera House competition (1964), he established a rectangular platform, an artificial landform inserted into the urban fabric, characterized by the opposition between the bold concrete forms of the staggered platforms and the wide-span floating roofs.²⁶ Fernández Alba’s proposal can be compared to Utzon’s project for the Madrid Opera House. Covered by S-shaped weightless roofs floating above the platform, Utzon’s asymmetrical auditorium is vigorously sculpted out of the massive platform and is characterized by a folded-plate roof supported by cables hanging from a tall mast.

Fernández Alba’s competition proposal for the Exhibition and Congress Center in Madrid (1965), which obtained the second prize, set out a stepped massive platform where the three auditoriums appear as if they were carved out of a solid mass in a manner reminiscent to Utzon’s platforms.²⁷ As an organizational strategy, the platform contains the service and secondary spaces, as well as the extensive underground parking and the backstage areas. The broad, rising levels of the platform were also arranged to form a public plaza, a gathering place that faces the city. The sculptural opulence of his straight-line platforms contrasts with the rhythmic elegance of his floating roofs. Fernández Alba understood the significance of rising above the ground level of the city, creating an artificial landscape that makes the building monumental. (Fig. 4)

Fernández Alba adapted Utzon’s way of drawing using the shadows cast and light shading to underline the relief of the platform.²⁸ In those projects, the raised platform is understood as an

22 In 1949, Jørn Utzon received the Zacharia Jacobsen Award scholarship to travel to the United States. In that study trip he visited Mies van der Rohe in Chicago and Frank Lloyd Wright in Taliesin. In Chicago, he visited Farnsworth house work in progress (1945-1950) and in Wisconsin Johnson Wax tower laboratory. Both will exert a remarkable influence in Utzon’s work. The trip continued towards California, where he visited Ray and Charles Eames in their new house at Pacific Palisades, a house built up of industrial prefabricated elements. The following stage of the trip took him to Mexico. In the Yucatan Peninsula, he visited Uxmal and Chichen Itza. Supported by ample horizontal platforms, the constitution of the temples emerged above the density of the jungle. The symbolic value of the platforms will exert a great influence on Utzon. The trip to Mexico turned into one of his greatest architectural experiences of his life.

23 Jørn Utzon, “Platforms and Plateaus: Ideas of a Danish architect,” *Zodiac* 10 (1962): 112-139.

24 Kenneth Frampton, “On Jørn Utzon,” in *Utzon Symposium. Nature Vision and Place*, ed. Michael Mullins et al. (Aalborg: Aalborg University, 2003), 7.

25 Antonio Fernández Alba (Salamanca, 1927), architect and Professor at Madrid School of Architecture. Critical and artistic, he fused the organicist currents of Wright, Aalto and Utzon with Spanish vernacular tradition.

26 Antonio Fernández Alba, *Antonio Fernández-Alba. Premio Nacional de Arquitectura 2003. Libro de fábricas y visiones recogido del imaginario de un arquitecto fin de siglo 1957-2010 [Book of Factories and Visions Collected from the Imaginary of an Architect at the End of the 1957-2010 Century]* (Madrid: Ministerio de Fomento, 2011), 76-79.

27 *Ibid.*, 80-83.

28 Carlos Montes Serrano et al., “Architectural Drawing in the Escuela de Madrid during the 1960s,” *disegno* 3 (2018): 149.

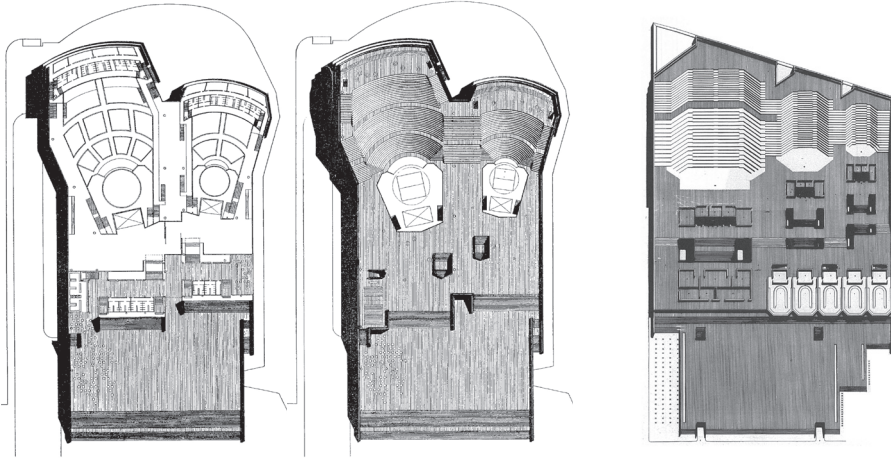


Fig. 4: Jørn Utzon. Sydney Opera House, 1956-1973 | Antonio Fernández Alba. Exhibition and Congress Center in Madrid, 1965

Fig. 5: Rafael Moneo. Competition entry for the Amsterdam Town Hall, 1967-1968



eruption of nature in the city, a fabricated grid-shaped terrain in contrast with natural ground. In Fernández Alba's competition proposal for the Exhibition Center in Gijón (1966), the raised platform becomes a continuation and evocation of the natural terrain with a lightweight superstructure designed with contrasting curvilinear forms seemingly floating above the staggered platform.²⁹ The raised plateau accentuates the horizontality of the platform and relies on the qualities of the surrounding landscape.

Rafael Moneo's work relies on a deep understanding of the site. The platform creating the base of his competition proposal for the Amsterdam Town Hall (1967-1968), which was highly commended, and the wide stairs leading up to it were suggested to Moneo by his work with Utzon and his knowledge of ancient terraced temples, from Mayan monuments to Chinese temples and Islamic mosques. The platform, anchoring the building to the terrain and containing all the spaces needed to serve the Town Hall became a built landscape³⁰ evoking an ancient architectural idea with the staggered surfaces and the vast stairway, as a gathering place, a town square, through interconnecting levels, social stairways, and cascading terraces to view the spectacle of Amsterdam's landscape. (Fig. 5)

Moneo's platform remarks the potential of the location and the character of the site. With its geometry, which is inspired by the stone blocks of the coastal walls, Moneo referred to the Kursaal auditorium in San Sebastian (1990-1999) as a geological event.³¹ The translucent volumes of the auditorium and convention center are seemingly stranded along the river, belonging more to the landscape than to the urban surroundings. The platform connects the slanted and luminous volumes of the auditoriums and offers continuity to the coastal landscape while also acting as a gathering place and becoming an evocation of the natural terrain of San Sebastian that adds a ceremonial quality to the site.

Alberto Campo Baeza (1946) has designed intense and poetic buildings like the Turégano House or the Caja Granada Savings Bank in Granada.³² He wrote: "I remember how the first news about Utzon reached me, reached my generation, from young Rafael Moneo's hand, who had worked with Utzon when Sydney's Opera, and was my teacher in 1967."³³ Recalling Utzon's famous sketches from "Platforms and Plateaus," Alberto Campo Baeza's work has explored the opposition of *earthwork* versus *roofwork*. According to the Semperian definition of tectonics, the stereotomic platform is heavy and sculpted while the tectonic one is a light structure. Campo Baeza's Blas House in Madrid (2000) explores the idea of a tectonic belvedere supported on a *stereotomic* box.³⁴ On the top of a hill, a platform was created to settle upon. The platform, rooted into the earth, houses the program and recalls the idea of the cave and the notion of refuge. From the belvedere on the top of the platform, one can contemplate nature.³⁵ (Fig. 6)

Campo Baeza's competition proposal for a Concert Hall in Copenhagen (1993) is "a rock on the water's edge, excavated in its interior, carved on its exterior."³⁶ The monumental scale of the raised platform becomes an artificial promontory in continuity with the landscape. The platform continues the landscape and also acts as a gathering place and outdoor auditorium

29 Fernández Alba, *Antonio Fernández-Alba*, 402-405. Antonio Fernández Alba et al., "Feria de Muestras de Asturias, Gijón," *Arquitectura* 100 (1967): 1-5.

30 Rafael Moneo, "Concurso Internacional para el Ayuntamiento de Ámsterdam," *Arquitectura* 124 (1969): 20-21, 42-53.

31 Rafael Moneo, "Centro Kursaal, San Sebastián," *Arquitectura* 309 (1997): 91-94.

32 Alberto Campo Baeza (Valladolid, 1946), architect and Professor at Madrid School of Architecture. His essential work adopted modern language with discipline and poetry. Heinrich Tessenow Gold Medal.

33 Alberto Campo Baeza, "Jørn Utzon, a gift from God," *Arquitectura* 355 (2009): 39.

34 Alberto Campo Baeza, "Casa de Blas, Sevilla la Nueva 1999-2000," *Arquitectura* 327 (2002): 10-11.

35 See also his House of the infinite in Cádiz (2014) and his remarks on Utzon's house in Porto Petro: Alberto Campo Baeza, "Más mar. Jørn Utzon en su casa de Porto Petro, Mallorca" ["More Sea. Jørn Utzon in His House in Porto Petro"], *Arquitectura* 309 (1997): 45-47.

36 Alberto Campo Baeza, *Campo Baeza* (Madrid: Munilla-Lería, 1996), 234.

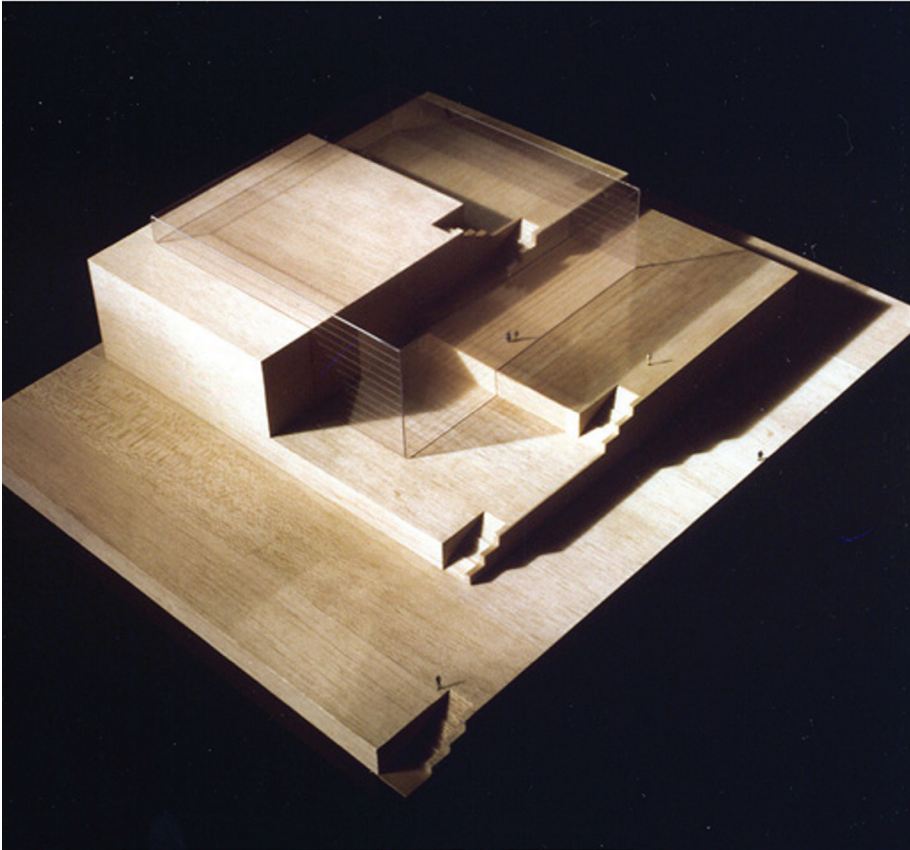
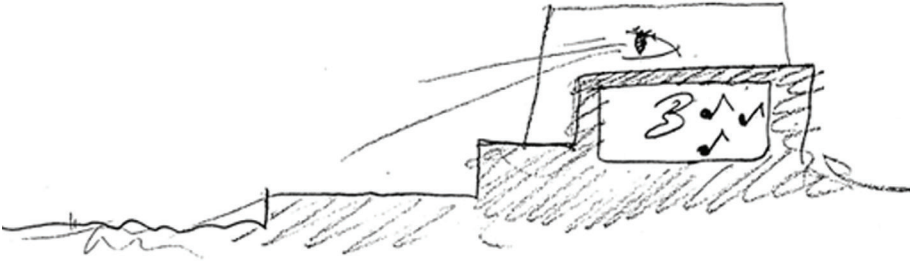


Fig. 6: Alberto Campo Baeza. Concert Hall in Copenhagen, 1993

protected by a glazed box-like belvedere on the edge of the canal. Alberto Campo Baeza understands the platform as “a rock excavated to protect and acoustically insulate these music boxes, and carved to empower and visually underline the beautiful landscape of Copenhagen.”³⁷ In the introduction to his last monograph, Alberto Campo Baeza wrote gratefully: “To Jørn Utzon whose generosity is reflected in the letters he wrote me praising my undeserving works. I never knew how to thank him for that.”³⁸

37 Ibid.

38 Alberto Campo Baeza, *Campo Baeza. Complete works* (New York: Thames & Hudson, 2014), 17.

**Geometric Systems as Project-Generating Elements:
Nieto & Sobejano, Mansilla + Tuñón, and Carlos Ferrater**

Utzon's work has become a relevant paradigmatic model for contemporary architects such as Nieto & Sobejano.³⁹ Their approach to design and their profound understanding of world cultures is combined with an authentic use of materials along with their awareness of the place. Their travels also provided them with significant inspiration that would be later manifested in their projects, which exhibited a sophisticated trans-cultural influence. The Congress Center of Aragón, by Fuensanta Nieto and Enrique Sobejano, was built in Zaragoza for the Expo 2008 and the concept of the folded roof goes back to Utzon's work.⁴⁰ Nieto & Sobejano organized a major exhibition on Utzon in Madrid in the early 1990s and since then they share with Utzon an attitude of respect and dialogue with the context and the approach to the roof as the project's generating element.⁴¹ The colossal planes of its folded expressionist roof was first developed for Leon's Congress Hall competition in 2006, which won the third prize, and was later built for the Congress Center of Aragón in Zaragoza.⁴² (Fig. 7)

The project is conceived from the desire to create combinations of a basic unit: a skylight repeated alternatively towards north and south with different variants according to the spatial needs of the program. The transformation of the unit enables for its adaptation to different circumstances. One single unit can define, by means of the mechanism of seriation, a system able to generate an order through the establishing of series. The rules to arrange elements in series are reflected in the sequence of the building's skylights, in the internal structure and cladding, which also fulfills the need to quickly complete the construction of this building. (Fig. 8)

Nieto & Sobejano recall: "our proposal is closer to some experiences such as those of Alvar Aalto and Jørn Utzon when the current digital means of formal generation did not exist and it was thus necessary to find, from the outset, a direct link between the architectural form, its construction and its execution."⁴³ The roof is built with prefabricated concrete panels and triangular ceramic pieces in two different sizes and two types of surface finishing, lacquered or matte. Meanwhile, the choice of ceramic tiles accentuating the sculptural character of the folded roof owes its inspiration to the Sydney Opera House's roof shells. (Fig. 9)

The Congress Center in Zaragoza shares a formal language with the corporate headquarters of Kastner & Öhler department stores that Nieto & Sobejano built in the historic center of Graz (2005-2012).⁴⁴ Nieto & Sobejano have placed the new folded roof that adapts harmoniously to the context of the city. Continuing the orientation of the city roofs, the new expressive roofscape and its diffuse top-lighting echoes Utzon's Melli Bank in Teheran (1959-1960), a serrated profile that springs up crowned by rows of skylights. Nieto & Sobejano wrote that "the roof is one of those architectural elements that in the past has played an essential role in the spatial and urban definition of the buildings, and that the modernist orthodoxy had reduced during most of the 20th century to the almost universal imposition of the horizontal roof." They argue that the Le Corbusier "axiom of the flat roof only began to be exceptionally questioned in the second half of the century, as it happened with some less known works by architects that, like Kahn or Utzon, would recover the potential of a building's roof, not only in its formal and volumetric expression, but as an element that generates space, light and structure."⁴⁵

39 Fuensanta Nieto (Madrid, 1957), founding partner of Nieto & Sobejano and Professor at the Universidad Europea, Madrid. Enrique Sobejano (Madrid, 1957), founding partner of Nieto & Sobejano and Professor at the Berlin University of Arts. Alvar Aalto Medal 2015.

40 For a contemporary account of Utzon's contribution on their work see: Enrique Sobejano, "Assembling, Folding, Carving: The Unbuilt," *AV* 205 (2018): 24-29.

41 Jørn Utzon, Jørn Utzon (Madrid: Ministerio de Obras Públicas, Transportes y Medio Ambiente, 1995).

42 Nieto & Sobejano, "Palacio de Congresos y recinto Ferial de León," *Future Arquitecturas* 1 (2006): 12.

43 Nieto & Sobejano, "Congress Center: Combinatorial Series," *AV* 146 (2010): 100-109.

44 Nieto & Sobejano, "Kastner & Öhler: The Roof as Generator," *AV* 146 (2010): 78-85.

45 *Ibid.*, 79.



Fig. 7: Jørn Utzon. Melli Bank, Teheran, 1960 | Nieto & Sobejano. Jørn Utzon Exhibition in Arquerías de los Nuevos Ministerios, Madrid, 1995 (above)

Fig. 8: Jørn Utzon. Melli Bank, Teheran, 1960 | Nieto & Sobejano. Congress Center of Aragón, 2008 (below)

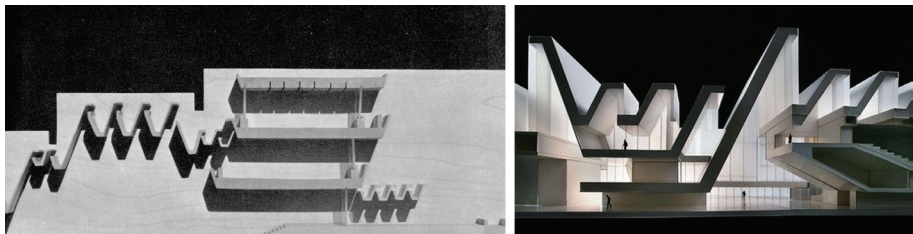


Fig. 9: Nieto & Sobejano. Congress Center of Aragón, 2008 (below)



The interplay of the different heights of the gables conceived by Nieto & Sobejano ensure a powerful spatial composition and provide diffused light from its multi-level roof. As in Utzon's work, the roof is the generator. Formally related to the Congress Center of Aragón, the folded roof is placed on the concrete slab of the last floor offering attractive views of the city, and does not enter the building. A series of parallel skylights defines a new roofscape sensitively inserted in the historic urban context.

In Graz's historic center, Nieto & Sobejano designed the extension of the Joanneum Museum (2006-2012).⁴⁶ The solution for the constricted site was to bury the extension two story underground, offering a new public space and organizing the underground connection between the existing building while acknowledging the value of the historical constructions as well. A series of circular patios and glass cones organizes the public square and introduces natural light into the two buried levels. Emerging in the form of cones from the underground, the project echoes the submerged galleries of the Silkeborg Museum.⁴⁷ Whilst living in Sydney, Utzon conceived the design proposal for an underground Silkeborg Museum of Art (1963), which was also in a constricted site. Utzon's unrealized project, one of the most outstanding unbuilt projects of the 20th century, was designed to house the work of Asger Jorn and inspired by the Yungang caves near Datong in China. The large three-story craters would have been bathed in natural light, filtered by sinuous walls sinking deep into the ground like caverns.⁴⁸ (Fig. 10)

The Interactive Museum of the History of Lugo (2007-2012) is located on the outskirts of the city.⁴⁹ The architects' aim was to create a museum that would also work as a public park in a former industrial area, which was linked to a sequence of green areas of the city. Nieto & Sobejano arranged the exhibition spaces on the underground level, freeing up the ground level where a series of large circular patios and cylindrical lanterns illuminate the underground museum. As a means of circulating dynamically, a cantilevered helicoid staircase gives access to the museum's lower levels. Utzon wrote on the Silkeborg Museum: "...visitors will move downwards almost imperceptibly along the descending ramps that guide them through the space."⁵⁰ Utzon's Silkeborg Museum could be considered as a precursor of Nieto & Sobejano's poetic reinterpretation in the Museum of the History of Lugo. Nevertheless, the museum also evokes the city walls of Lugo and the industrial silos.

The funneled voids of the Museum of the Canary Islands (2003-2012) are a reminder of Utzon's deep window-bays in Can Lis framing the sea in sandstone, and also the additive principle of combinatorial variations that blend the museum constructive stages into the dense urban fabric of Las Palmas.⁵¹ (Fig. 11)

Skylights and narrow voids between the pieces stress the additive character of the project in accordance to Utzon's additive principle. To Utzon, geometry is an instrument used in order to solve complex forms; what is more, he found tectonic solutions in it. Utzon discovered that the sphere contained all the forms required for the shells of the Sydney Opera House.⁵² Geometry provided the key to designing the forms by means of drawing and testing models, prototypes and industrial production described as additive architecture.⁵³ This additive principle generated an enormous potential with a limited range of components, as in the Espansiva building system (1969) and later the Kuwait National Assembly (1972-1982)⁵⁴. (Fig. 12)

46 Nieto & Sobejano, *Nieto Sobejano: memory and invention* (Ostfildern: Hatje Cantz, 2013), 69-71.

47 Jørn Utzon, "Silkeborg Kunstmuseum," *Arkitektur*, 1 (1964): 1-5.

48 Adrian Carter and Marja Sarvimäki, "Utzon: The defining light of the Third Generation," *ZARCH* 10 (2018): 88-99.

49 Nieto & Sobejano, "Museum of History: Pedagogical Landscape," *AV* 146 (2010): 130-139.

50 Richard Weston, *Utzon: inspiration, vision, architecture* (Hellerup: Bløndal, 2002), 217.

51 Nieto & Sobejano, "Canary Islands Museum: Addition Process," *AV* 146 (2010): 60-67.

52 Françoise Fromonot, "Jørn Utzon: Architetto della Sydney Opera House (Milano: Electa 1998): 85-90.

53 Jørn Utzon, *Additive Architecture, Jørn Utzon Logbook V* (Hellerup: Bløndal, 2009), 28.

54 Jørn Utzon, *Kuwait National Assembly, Jørn Utzon Logbook IV* (Hellerup: Bløndal, 2008).

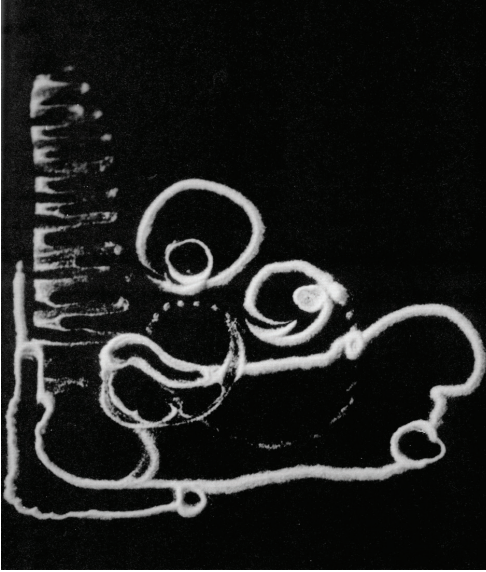
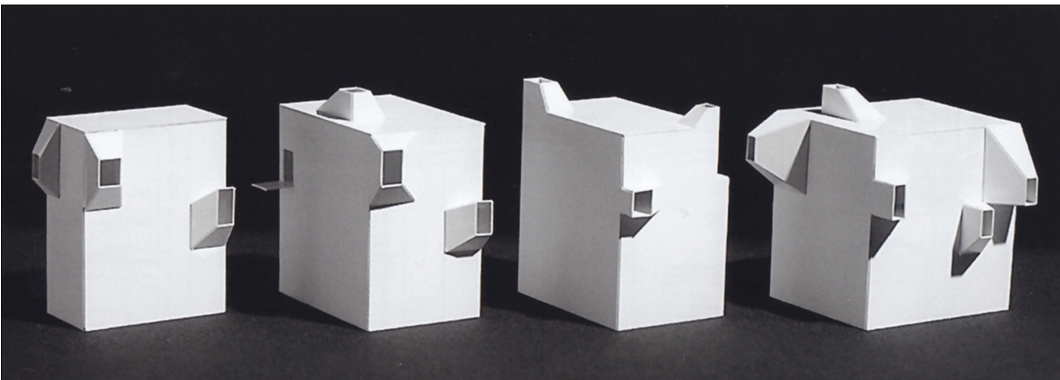
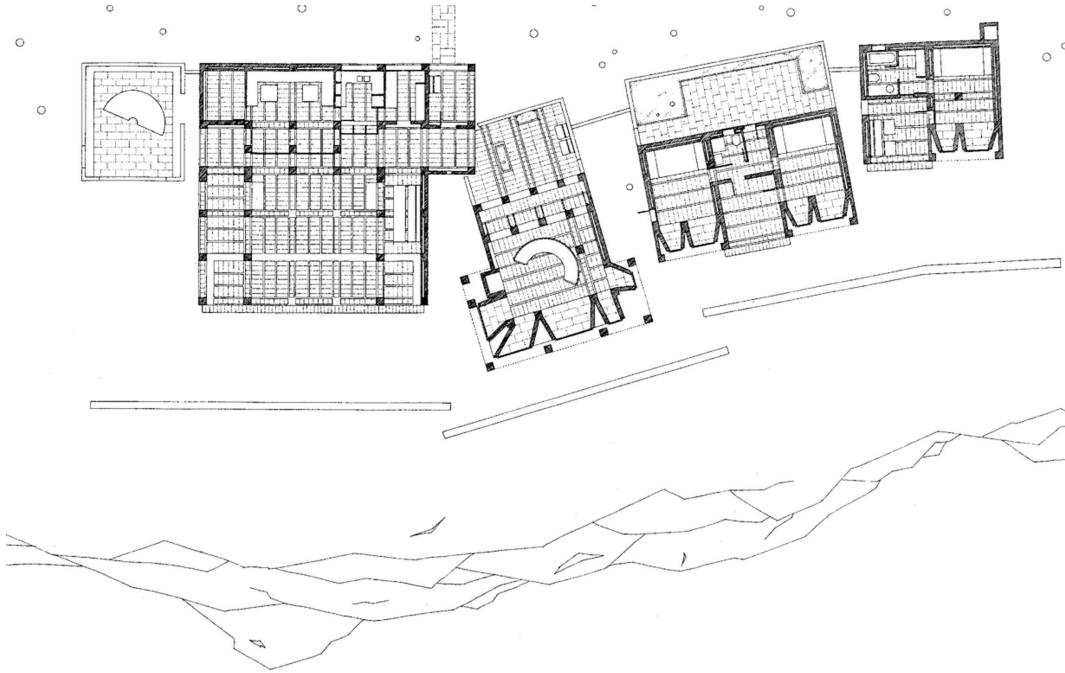


Fig. 10: Jørn Utzon. Silkeborg Museum of Art, 1963 | Nieto & Sobejano. Interactive Museum of the History of Lugo, 2007-2012 (above)

Fig. 11: Jørn Utzon. Can Lis, Mallorca, 1971-1973 | Nieto & Sobejano. Canary Islands Museum, 2003-2012 (below)



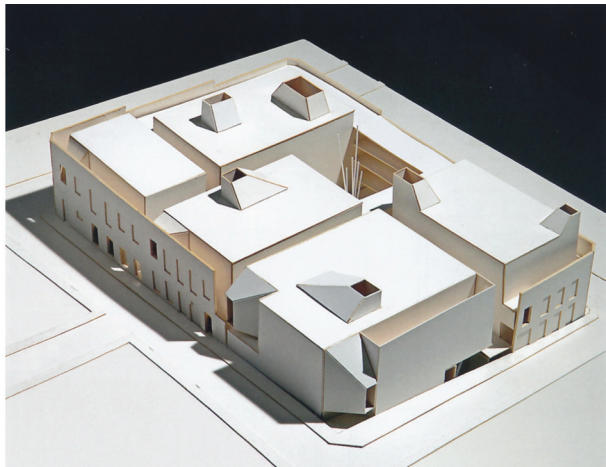
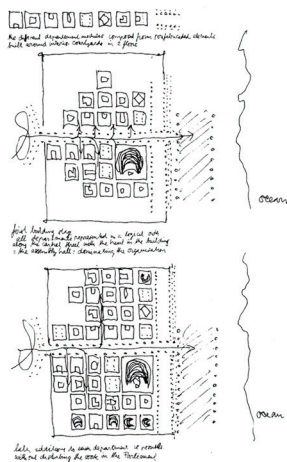


Fig. 12: Jørn Utzon. Kuwait National Assembly, 1972-82 | Nieto & Sobejano. Canary Islands Museum, 2003-12 (above)

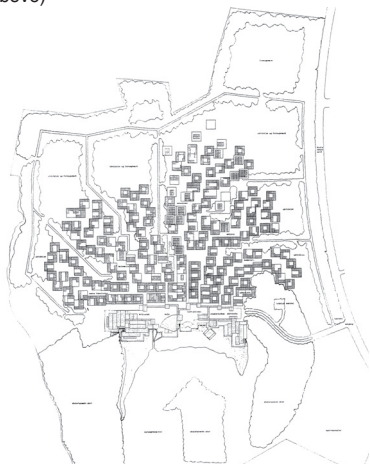
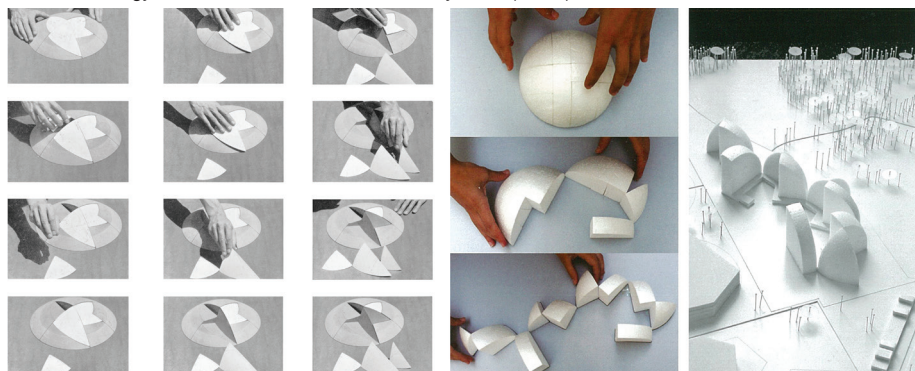


Fig. 13: Jørn Utzon. University Centre in Odense, 1966 | Mansilla + Tuñón. Vega Baja Museum in Toledo, 2010 (above)

Fig. 14: The use of models in the design process. Jørn Utzon. Sydney Opera House, 1956-1973 | Mansilla + Tuñón. Energy Dome of the Soria Environment City, 2008 (below)



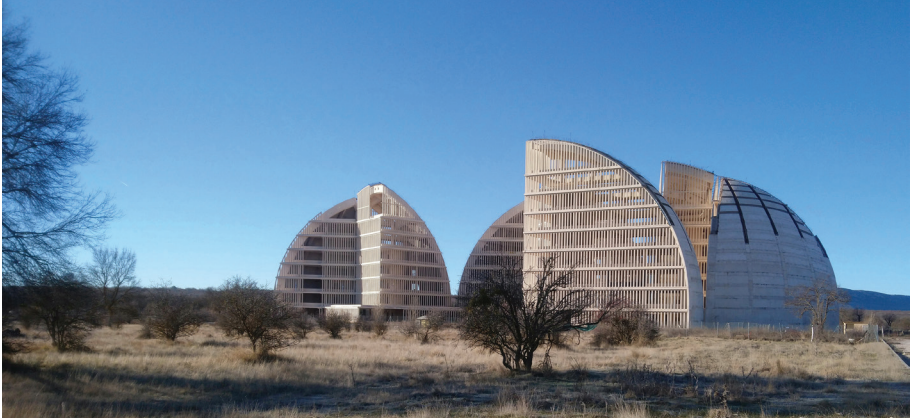
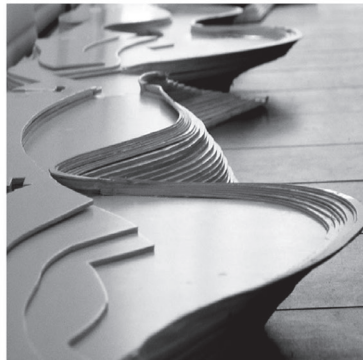
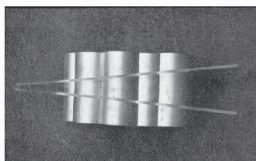
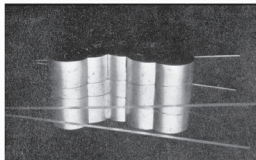
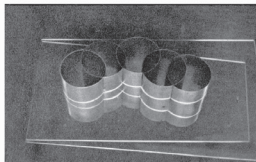
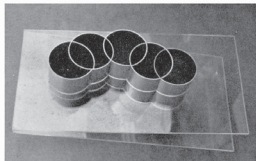
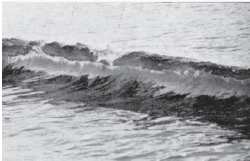
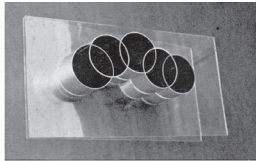


Fig. 15: Mansilla + Tuñón. Energy Dome of the Soria Environment City, 2008 (above)

Fig. 16: Jørn Utzon. Sydney Opera House, 1956-1973 | Carlos Ferrater. Benidorm Waterfront, 2009 (below)



Additive architecture describes a system of standardized elements enabling any building to be constructed on the basis of the repetition of architectural units able to achieve dynamic open-ended structures. Utzon's work extrapolates mass production and tectonic industrialization in large scale projects such as the Farum town centre (1966).⁵⁵

Trained in the studio of Rafael Moneo, Mansilla + Tuñón's office was established in 1992 and their formal research embraces a flexible modernity and evolutionary adaptation of their ideas to the characteristics of place and program.⁵⁶ Their work method is committed to the discipline; their operations have been able to yield such a rich and varied series of architectural open structures, logically resolved by creating an assemblage that has grown over time creating pathways, plazas and expansive views. This logic of aggregation recalls Utzon's expansive systems developed in his design for a University Centre in Odense (1966).⁵⁷ To Utzon, "individually designed houses, forming part of a group, which in spite of major variations in the layout and facade design, will form an integral unit because of the kinship of the forms recurring in all of the houses."⁵⁸ To Mansilla + Tuñón these projects, as well as the Vega Baja Museum in Toledo (2010),⁵⁹ use modulation and repetition to generate a complex expansive system of an organic appearance, by using the underlying principle in Utzon's clusters of courtyard housing. The project is conceived on a rule-based system of repetition and variation, maintaining overall coherence and creating a strong sense of unity. Mansilla + Tuñón's design process — "thinking through successive approximations"⁶⁰ — offers general rules and engages intuition. As in Utzon's design process, "intuition is the architect's main way of figuring things out."⁶¹ (Fig. 13)

Inspired by Utzon's design method, their competition entry for the Energy Dome of the Soria Environment City (2008) begins with a few simple rule-based operations.⁶² The formal structure of the design is based on the dome both as a unitary form and a set of rules. They start off from a half sphere that accommodates the requested program and then a series of cuts, rotations and displacements activate the site and define the spaces between figures, which is as important as the figure itself. They propose a method to carry out the project by means of a series of operations such as fragmentation, articulation and unfolding the interconnected pieces that define the scattered construction and the complex relationships between them. (Fig. 14)

As in the Sydney Opera House, the arches, whose segments are obtained from a sphere, are easily drawn and calculated. They have a strong sense of unity because all these fragments belong to the same family. All the roof shapes derive from a single sphere and this geometry benefits from the economy of prefabrication. Mansilla + Tuñón also share Utzon's singular working method through the extensive use of models. (Fig. 15)

Utzon produced a wide range of projects that work with the technique of additive architecture, drawing from his knowledge of nature's forms, and from the tectonic resolution of the Sydney Opera House. Also inspired by the vertical profile of Cantabria's mountains, Mansilla + Tuñón conceived an expressionist and articulated explosion of trapezoidal skylights of a faceted contour, exploring the variation and repetition of elements for the Cantabria Museum (2002), merging the internal grammar of combination and variations and the unity of the repeated figure.⁶³

55 Jørn Utzon, "Additive Architecture," *Arkitektur 1* (1970): 1-48.

56 Luis Moreno Mansilla (Madrid, 1959 - Barcelona, 2012) and Emilio Tuñón (Madrid, 1959), both graduated from the Madrid School of Architecture. From 1982 to 1992 they worked in Moneo's office. Professors at Madrid School of Architecture since 1998. Mansilla + Tuñón have won several architecture competitions. In 2014, The Ministry of Culture of Spain awarded Mansilla + Tuñón the Gold Medal of Merit in the Fine Arts.

57 Jaime J. Ferrer Forés, *Jørn Utzon. Works and Projects* (Barcelona: Gustavo Gili, 2008), 242-243.

58 Utzon, *Additive Architecture*, 35-35.

59 Mansilla + Tuñón, "Vega Baja Museum. 2010, Toledo," *AV 144* (2010): 160-165.

60 Stan Allen, "Disciplined Play, the Latest Projects," *AV 144* (2010): 23.

61 Jørn Utzon in Michael Asgaard Andersen, *Jørn Utzon. Drawings and Buildings* (New York: Princeton Architectural Press, 2014), 12.

62 Mansilla + Tuñón, "Energy Dome. 2008, Soria," *AV 144* (2010): 148-153.

63 Mansilla + Tuñón, "Museum of Cantabria. 2003, Santander," *AV 144* (2010): 90-95.

Exploring the creative possibilities in architecture, Carlos Ferrater's digital tectonic design emulates the forms found in nature.⁶⁴ Utzon's father, a naval engineer, studied waveforms to improve the design of his boats and Utzon's deep appreciation of nature as a source of inspiration is shown in a series of photographs of waves, described in the geometrical development of the Minor and the Major Hall of the Sydney Opera House. Utzon wrote about the sequence of photographs: "The invisible wind works up the water forming the surface into waves, varying winds-varying waves, but always of the same character."⁶⁵ (Fig. 16)

Such experiences were re-interpreted consistently in the Benidorm Waterfront (2009) unraveling the given rules to create new ones.⁶⁶ Applying the latest construction technology, the project as a place of transition between the built city and the natural space of the sea and the beach is the result of a design process that establishes specific geometrical laws and modulations that ensure the constructive logic. A series of braided sinuous lines define a new topography, adopting natural and organic forms that recall the structure of a cliff or the movement of waves. Following geometrical patterns, the surfaces of the waterfront cross over each other, they move and change levels generating a rich promenade with its rigorous concrete waves and the bright colors of its ceramic tiles in one of the main touristic cities of the Mediterranean.

Connection with the Landscape: Francisco Javier Sáenz de Oíza and RCR Arquitectes

Starting off with the study of the landscape and the history of the place, Utzon's approach to place meant to seamlessly blend the building into its site. Utzon's appreciation for natural landscape and his imaginative audacity and lyrical finesse achieve a poetic relationship with the site's specific context. RCR Arquitectes have worked in their rural context of Olot, a volcanic landscape, developing a personal language characterized by geometric and material rigor and by sensitivity towards nature.⁶⁷ Their projects share the idea of establishing a respectful relationship with the natural environment. In the Golf Catalunya housing estate (2005),⁶⁸ RCR Arquitectes re-interpreted Utzon's housing complex in Arnebråten, Oslo (1951), developed in collaboration with PAGON, the Norwegian section of the CIAM founded in 1950.⁶⁹

Integrated in the natural environment, the housing complex extends along the retaining wall of the new road access and the house is open to the landscape. When seen from the road, the group of houses disappear. The architects face the site's topography to enrich and integrate the project into nature and establish an intense spatial connection with the landscape. A building can be placed on the ground, sunken into it or elevated. RCR Arquitectes wrote: "The houses are arranged like threads that highlight the topography."⁷⁰ The architecture is a framework for the contemplation and enjoyment of nature. This also was the principle for the architect's house built in Hellebæk (1950-1952). (Fig. 17)

At Elineberg, with the construction of 14-story towers, Utzon's stepped arrangement of the floor slabs allows for every apartment to focus on the landscape, not the sky. The size of the steps gradually increased with altitude, forcing observers to direct their view downward.⁷¹ (Fig. 18) Sáenz de Oíza took this idea from Utzon's project in Elineberg, Helsingborg (1954-1966).

64 Carlos Ferrater (Barcelona, 1944), architect and Professor at the Barcelona School of Architecture.

Awarded the 2009 National Architecture Award by the Spanish Ministry of Housing for his entire career.

65 Jørn Utzon, "The Sydney Opera House," *Zodiac* 14 (1965).

66 Carlos Ferrater and Xavier Martí, "Waterfront, Benidorm," *AV* 141-142 (2010): 52-59.

67 William J. R. Curtis, "Dark Matter," *AV* 175 (2015): 4-11.

68 RCR Arquitectes, "PGA Golf de Catalunya Housing State," *El Croquis* 138 (2007): 254-259.

69 Christian Norberg-Schulz and Gennaro Postiglione, *Sverre Fehn. Opera completa* [Sverre Fehn. Complete Works] (Milano: Electa, 2009), 68.

70 RCR Arquitectes, "PGA Golf de Catalunya Housing State," *El Croquis* 138 (2007): 258.

71 Keld Helmer-Petersen, "Jørn Utzon: a new personality," *Zodiac* 5 (1959): 70-105.

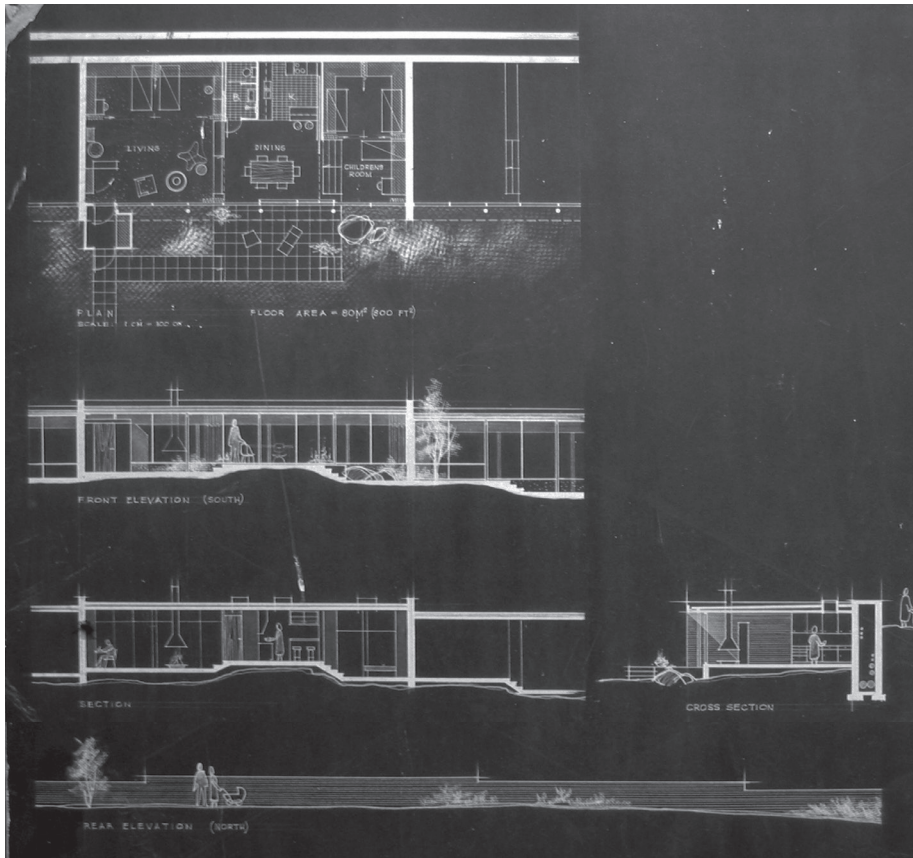
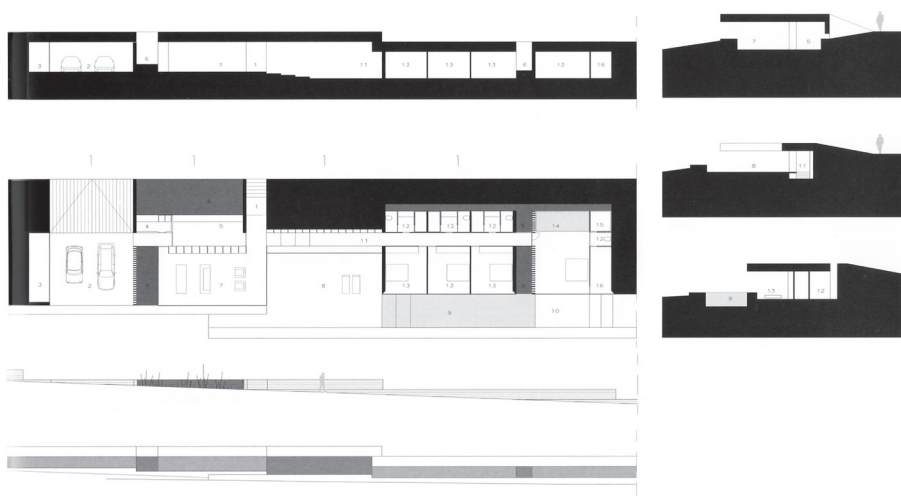


Fig. 17: Jørn Utzon and PAGON. Housing complex in Arnebråten, Oslo, 1951 (above) | RCR Arquitectes. Golf Catalunya housing estate, 2005 (below)



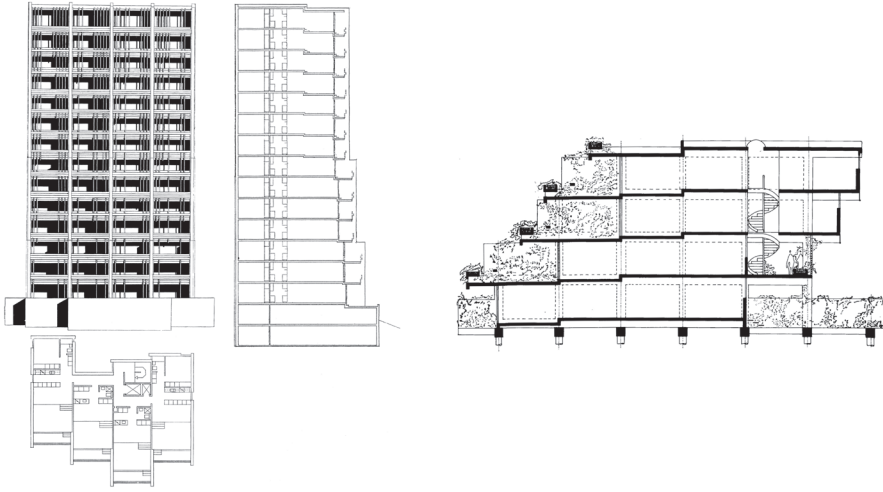


Fig. 18: Jørn Utzon. Housing in Elineberg, Helsingborg, 1954-1966 | Francisco Javier Sáenz de Oiza. Apartments in Ciudad Blanca, Alcudia, Majorca, 1961-1963

Utzon wrote:

“The section shows clearly an attempt to see more than the grey Nordic sky from the flats on the 5th – 14th floor. The grey Nordic sky is namely what you see when you have the normal window sill and balcony balustrade. Here the floors are terraced - the higher, the steeper steps - so you can stand on the 14th floor and see the beautiful ocean 2 kilometers away.”⁷²

Oíza affirmed that “in Alcudia you can find Utzon’s descending planes of the slabs.”⁷³ The vertical movement of the apartment units creates a section whose stepped profile evokes the project of the housing complex in Birkebo (1960) or the competition entry for Elviria in Malaga (1960) by Jørn Utzon. “I must declare that an Utzon project in Malaga influenced me,”⁷⁴ stated Oíza. The view was also filtered by a system of vertical wooden bars that were closer to each other the higher the apartment was. In Ciudad Blanca in Alcudia, Majorca (1961-1963),⁷⁵ Sáenz de Oíza developed this idea in 1961 in collaboration with Rafael Moneo, still a student at the Madrid School of Architecture,⁷⁶ who, later on that year, moved to Hellebæk to work with Utzon.

Captivated by the Danish master, Rafael Moneo worked for a year (1961-1962) in Utzon’s office, contributing decisively to the geometric tracing of the great vaults of the Sydney Opera House as a “succession of spherical triangles that could be prefabricated.”⁷⁷ Moneo recalls how “Utzon turns to geometry and in it finds the keys to a type of construction that results into the desired form.”⁷⁸ Rafael Moneo’s knowledge of descriptive geometry was crucial in order to solve the required sections by tracing the projections of the vaults according to the spherical geometry model presented in the Sydney Opera House Yellow Book, 1962.

72 Ibid., 99.

73 Francisco Javier Sáenz de Oíza, “D’A Entrevista Oíza,” *D’A* 3 (1989): 67.

74 Ibid., 67.

75 Francisco Javier Sáenz de Oíza, “Ciudad Blanca revisitada,” *D’A* 3 (1989): 42-59.

76 Francisco Javier Sáenz de Oíza, “D’A Entrevista Oíza,” *D’A* 3 (1989): 67.

77 Rafael Moneo, “Sobre el escándalo de Sidney,” *Arquitectura* 109 (1968): 54.

78 Rafael Moneo, “On Utzon’s Architecture: Some cordial Observations,” *Louisiana Revy* 2 (2004): 88-89.

Moneo acknowledged:

“I had been attracted to Utzon for a long time. I remember an issue of *L'Architecture d'Aujourd'hui* that had enticed us all a few years before. It featured a group of young architects from all over the world and the cover was devoted precisely to the Sydney Opera House project. I had written to Utzon to tell him that I wanted to work with him but had received no answer, so after the summer I showed up at his office.”⁷⁹

Lin Utzon recalls the morning when she was walking to school and a bus came by, leaving a young man who then asked for Mr. Utzon. She took his hand and led him to her father's studio.⁸⁰ “Traveling was hard at the time, and he was surely impressed by my determination to go there [...]. The fact is that he accepted me, and I spent a year [...]”⁸¹ “So I went to Denmark to work with Utzon, whom I considered then the rightful heir to the masters of the heroic period.”⁸² The year of training with Utzon left an indelible mark on him.

Conclusion

Utzon's work and approach to architectural design has had a significant influence upon contemporary architecture across the world, and his legacy has inspired many outstanding contemporary Spanish architects. As Utzon himself expressed in his early text published in 1948, “Conditions in the time we are living differ completely from those of the past, but the essence of architecture, the seed is the same. On account of differing conditions, similar seeds turn into widely differing organisms.”⁸³ Utzon's work has a direct influence on contemporary developments in architecture, from the use of geometric systems as the project's generating element, with an approach grounded in the place and culture to a more humane and contextual direction, emphasizing the connection with the landscape and understanding architecture as a culture and as a specific form of knowledge.

Utzon's influence has been strong in a number of countries.⁸⁴ First in Denmark, where he exerted a certain influence on architects such as Henning Larsen or Boje Lundgaard and Lene Tranberg, among others. However, beyond Denmark, the two contexts in which Utzon has been most influential are Australia and Spain, where he has exerted an important influence on architects, so outstanding and at the same time so capable of developing an architecture of great quality and formal complexity, as Rafael Moneo. As the projects presented above are able to show, Spanish architecture honors Utzon's legacy not by repeating it, but by extending it.

Jørn Utzon chose Majorca as a place to retire from his professional life, spending long periods of time in Can Lis (1971-1973) and in a new house at S'Horta called Can Feliz (1994). The main values of his legacy survive in his last house in Majorca and in his influence on many of the most prominent Spanish architects. Utzon's works make up a wide and diverse set able to inspire in many different ways. In order to figure out a master's lessons for his disciples, gathering a set of works with their common features is not enough. It is, however, necessary to discern

79 Ana Esteban Maluenda, “Sustrato y sedimento. Los viajes en la formación y evolución del arquitecto: el caso de Rafael Moneo,” in *Viajes en la transición de la arquitectura española hacia la modernidad* (Pamplona: Universidad de Navarra, 2010), 156.

80 Federico Climent, “The active gaze,” in *Rafael Moneo. De la Fundació a la Catedral de L. A. 1990-2002* (Palma: Fundació Pilar i Joan Miró a Mallorca, 2002), 8.

81 Luis Fernández-Galiano, “Se construye con ideas: Rafael Moneo, una conversación,” *Arquitectura Viva* 77 (2001): 71-72.

82 Rafael Moneo, “Tres entrevistas. Primavera, 1985 con Fernando Márquez y Richard Levene,” *El Croquis* 20+64+98 (2004): 17.

83 Jørn Utzon, “The essence of Architecture,” in Jaime J. Ferrer Forés, *Jørn Utzon. Works and Projects* (Barcelona: Gustavo Gili, 2008): 23.

84 Michael Asgaard Andersen, *Jørn Utzon. Drawings and Buildings* (New York: Princeton Architectural Press, 2014), 19.

among the different attitudes, since there is a remarkable difference between the reinterpretation and the simple repetition of his legacy. The most interesting disciples are those who developed an architecture that barely resembles that of Utzon but deeply assimilated his method and attitude, tirelessly experimental and intuitive.

Antonio Fernández Alba's organic revision of modernity shows some very direct formal influences in several competitions of the sixties, such as the platforms designed for the Madrid Congress Center competition (1965), which illustrate the impact of Jørn Utzon's work on the evolution of Spanish architecture.

The trajectory of Francisco Javier Sáenz de Oíza moved from the reinterpretation of modernity to the organicism of the Madrid School. His intellectual curiosity and continuous formal exploration include reworked influences of Utzon's work that he introduced in the stepped apartments of Alcudia in Majorca (1961-1963), together with his young collaborator, Rafael Moneo. After concluding his training in the offices of Francisco Javier Sáenz de Oíza and Jørn Utzon, Rafael Moneo's career flows from the organicism of the Madrid School, present in his first works, to the development of his own language, attentive to the context and the architectural types and creating an extensive work of great formal complexity.

As a result of his deep understanding of the works of Jørn Utzon, Moneo's continuous reworking shows his experimentation with what he had learned through its transformation and combination with other influences, leading to results formally far removed from its model. Thus, Utzon exerted an extensive influence on Rafael Moneo, in his built work and his teaching activity as Professor in the Architecture Schools of Barcelona and Madrid.

Alberto Campo Baeza, a student of Moneo at the Madrid School of Architecture in 1967, approached Utzon's works through journals such as *Zodiac* (1959, 1962, 1965); *Arquitectura* (1968), which included Rafael Moneo's reply to Felix Candela's criticism on the structure of the Sydney Opera House; and *Nueva Forma* (1974), through the monographic issue that Juan Daniel Fullaondo devoted to the construction of the Sydney Opera House. Professor Alberto Campo Baeza wrote two articles about Utzon's house in Porto Petro published in the *Arquitectura* journal and maintained a close relationship with Utzon.

The works of Mansilla + Tuñón understandably show their extensive collaboration with the office of Rafael Moneo, and indirectly a great influence of Jørn Utzon, especially when they conceived the Soria Environment City (2008), operating through successive approximations in the search for a particular order.

Nieto & Sobejano contributed to the introduction of Utzon's ideas in Spain through the monographic exhibition they curated at the *Arquerías de los Nuevos Ministerios* in Madrid and the edition of the exhibition catalog (1995). Proving their admiration for the Danish master, and initiating a disguised use of Utzon's themes as a fertile formal source, Nieto & Sobejano expand and develop certain archetypes in their works and projects, showing the potential of Utzon's approach.

Meanwhile, in the works of Catalan architects like Carlos Ferrater and RCR Arquitectes, intense and episodic influences can be identified that explain a confluence of interests in the knowledge of the forms of nature, in the case of the Benidorm promenade by Ferrater (2009) or the topographic integration of the Golf Catalunya housing state by the RCR Arquitectes (2005).

Despite the few available publications, which have created a shroud of secrecy around a legendary figure, Jørn Utzon has benefitted from an increasing prestige and authority over time that few 20th century architects have achieved. He remains an architect of enormous influence, especially among those young architects who revisit his works with a new sensibility, as Rafael Moneo once did, assimilating and reinterpreting his approach. Despite the passing of time, the legacy of Jørn Utzon possesses the never-ending strength of his works and projects and the full validity of his ideas.

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