

## The Utzon Paradigm

A HUMANE, TRANSCULTURAL, TECTONIC AND INNOVATIVE APPROACH WITHIN CONTEMPORARY ARCHITECTURE

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The Jørn Utzon Research Network (JURN) was instigated to build-upon the work initiated within the Utzon Research Center, Aalborg Denmark, in developing an international network of academics, practitioners and students engaged in the interrogation of Utzon's oeuvre with the objective of developing contemporary critical discourse and dissemination of the potential of Utzon's contribution to current architectural debate and praxis. The subsequent purchase of the Utzon Archive by the University of Aalborg, was motivated by this potential.

From the outset, it was self-evident that to examine Utzon's oeuvre, a particular research methodology was required, that responded to Utzon's non-theoretical approach. We adopted a paradigmatic frame of investigation that embraced not only Utzon's intellectual positions, but also captured more subtle elements of influence such as travel, Utzon's formative experiences and his consistent attitudes of humanity and humility.

We introduced the concept of a broader paradigmatic framework for the Study of Utzon's oeuvre in a Paper<sup>1</sup> presented at the Third International Utzon Symposium held in Marrakech, Morocco in April 2012. The hypothesis was that as Utzon did not subscribe to a singular theoretical position, (or has been ascribed such a position), it

was considered inappropriate to interrogate Utzon's methodologies and artefacts from a purely theoretic position.

The idea of paradigm study was generated from a consistent pedagogic model developed in the University of Portsmouth, School of Architecture. Employed variously from the 1960s, the 'Paradigm Project' has, under diverse authorship, invited interrogation of the work, zeitgeist and influences of significant architects. Students are subsequently asked to design a project 'in the manner of' the architect studied. The objective is to promote a broad and multi-dimensional understanding of the architect, their design methods, influences, and chronological relationships within the context of the particular period.

Having thus considered the paradigmatic potential of many notable historic and contemporary practitioners; Utzon provides a particularly appropriate and outstanding example, with which to critically consider, develop and promote certain thematic issues within architecture. Jørn Utzon's work can be seen to embody a visionary approach to architecture that is site specific and poetic, tectonic, sustainable and humane; that derives from a profound appreciation of nature and the diversity of human cultures, as sources of inspiration and analogy, combined with an intuitive sense of architecture as art and a pragmatic, yet innovative approach to the use of technology extruded, according to Utzon, to the "edge of the possible," that is relevant today.

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<sup>1</sup>Tyrrell, R and Carter, A 'The Utzon Paradigm.' Paper delivered at the Third International Utzon Symposium, Marrakech, Morocco. April 2012.

The focus upon Utzon at Aalborg University was appropriate not merely because of his familial connection to the city, but more significantly in relation to a new education, focusing upon the synthesis between architecture and engineering, in which regard Utzon's architecture, most notably the Sydney Opera House, can be seen to be exemplary. Through many years, the presentation and discussion of Utzon's work, sources of inspiration, design methods and techniques, have provided a valuable means to communicate an understanding of tectonics in architecture; in Utzon's approach, as a humane and poetic synthesis of form, function and construction.

In collaboration with the University of Portsmouth, where the paradigm remains a significant means of architectural education and in discussion with other international colleagues, and through the establishment of the Jørn Utzon Research Network; the broader potential of the Utzon Paradigm was further developed, particularly with regards the transcultural and non-theoretical considerations of Utzon's approach.

#### Of Utzon's Paradigm:

Our work in defining Utzon's paradigm led us to a tripartite structure that embodied the elements of *Arche* and *Techné*, conjoined by what we term, *the Poetic Synthesis*. Drawn from the ancient Greek and being the etymology of the term *Architect*, *Arche* represents the origin (of the thing or indeed the idea) and *Techné*, the bringing forth of the *Arche*. Such a plural framework also mediates the historic tension in architectural theory between theory and praxis. However, although they overlap, *Arche* and *Techné* require formal fusion through what we describe as 'The Poetic Synthesis'; a term designed to capture the metaphysical dimension of the architect and of course the artifact.

Mapping of this hypothesis reads thus:

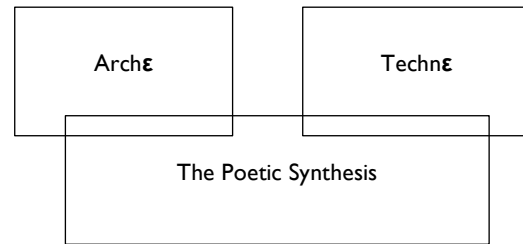


FIGURE 1 – PARADIGM MAP

To illustrate and populate this hypothesis in the context of Utzon we posit the following elements:

To develop each of those sub-categories:

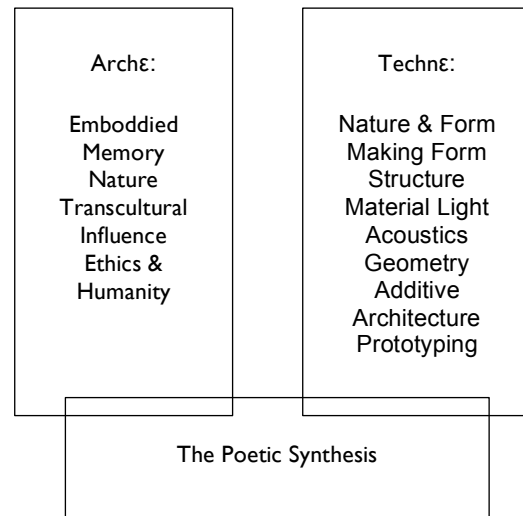


FIGURE 2: UTZON PARADIGM MAP

#### Of Arche:

##### *Embodied Memory:*

The impact of Utzon's formative experience is clear in all discussion of Utzon's work and methods. His early interest in nature and its forms and structures inculcated by his father, Aage Utzon, his childhood presence in the Aalborg Shipyard witnessing the construction of huge hulls of ships, and his father's renowned yacht designs, all became embodied within Utzon and were, in diverse ways, to later inform not only his design synthesis, but also his design approach.

##### *Inspiration from Nature:*

Utzon's held a fascination for nature, born of his father, which he later shared with close colleagues Tobias Faber and Arne Korsmo, with the forms and structures found in nature; as exemplified by D'Arcy

Thompson's book, *On Growth and Form*. Utzon believed that as in nature, there should be the possibility for growth within architecture.

*Transcultural Influences:*

Utzon was an inveterate traveller. Having been introduced to architectural influences from China and Japan as a student and young practitioner, Utzon developed an insatiable interest in other cultures and his first foray beyond the Nordic and European realm, was to Morocco. Hence the appropriateness of the previous Third International Utzon Symposium taking-place in Marrakech and conjoined Utzon Workshop that followed in Utzon's footsteps across the Atlas Mountains.

*Landscape and Place:*

Nowhere did Utzon's appreciation of Transcultural Influence manifest itself that in the understanding of the relationship between landscape and place. His design response with the Kingo and Fredensborg housing projects were clearly influenced by his experiences hiking in the High Atlas Mountains of Morocco. His design synthesis reinterpreted for a Danish context, clearly inspired by both the typologies and place/landscape relationships he witnessed in the modest hill-villages of Morocco.

*Ethics and Humanity:*

Utzon's work reflects a continuation of a Nordic tradition both within modern architecture and in society as a whole, that focuses on social well-being, equality and of ascribing value to the collective community. As with Aalto and other Nordic architects, this is manifested in providing architectural solutions to the large numbers of displaced refugees following the Second World War and his considerable interest in affordable collective housing projects, most famously the Kingo and Fredensborg courtyard housing developments north of Copenhagen.

These projects are still considered to be some of Denmark's most successful suburban housing. Not only in terms of the fine balance between the privacy of the individual and the strong sense of community that is engendered by the architecture, but also the

efficiency of the planning, that allow considerably higher density to be achieved than is normally the case in such a suburban context, whilst allowing large part of the sites to remain undeveloped and landscaped, as shared communal space.

**Of Techne:**

*Nature and Form:*

Just as nature inspired Utzon, he reinterpreted natural form as an effective response to tectonic challenges. Much has been made of the relationship between the palm frond and the resolution of the shell structure of the Sydney Opera House but we see inspiration drawn from nature's forms in a diverse range of other projects.

*Making, Form and Structure:*

Central to Utzon's oeuvre is a complex engagement in the relationship between structure, construction and form; a tectonic approach. Kenneth Frampton's writings on Utzon, firstly in relation to a critical regionalism in architecture, and more notably, in his dedication of a chapter on Utzon, in his seminal publication *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, reinforces Utzon's significance as an exemplar of a tectonic approach within modern architecture. Grounded within a background in boat building, and further informed by the wider craft based tradition within Danish architecture of that time.

*Material Light and Acoustics:*

Extending Utzon's engagement with a tectonic design approach is his sense of materiality in the context of 'utilised light' as articulated by Louis Kahn. This response to light was in addition, 'place specific'; his response to 'the fifth elevation of the Sydney Opera House was to use reflective ceramic surfaces drawing from his experiences in the Middle East and North Africa. His design response in Bagvaerd Church was, in contrast, to draw in the more subtle indirect glancing light of the North that encourages dialogue with the deities. His engagement with the acoustic qualities of space resonate powerfully in two particular examples of his work; the billowing ceiling

forms of Bagsvaerd Church and the intended ceiling forms of the Sydney Opera House.

*Geometry:*

In geometry, Utzon found tectonic solutions. For him, geometry was not an end in itself, but rather the means by which effective and efficient tectonic solutions could be achieved. The complexity of the shell roof forms of the Sydney Opera House, were brought to magnificent resolution through the application of geometry.

*Additive Architecture:*

Engagement with geometry also facilitated opportunity to engage with the utility of additive responses. Utzon's organic understanding of design, led him to what he referred to as additive architecture; a concept, based in part upon his understanding of the ancient Chinese building manuals, whereby a one-family house and also complex large scale architecture could be created using a limited number of pre-fabricated components. Whether we consider the repetition of the shell structures in Sydney or the typological development of the Kingo or Fredensborg projects we see addition and repetition as a core characteristic of Utzon's work.

*'I happened to say something that Jørn asked me to repeat. He then got up and with his 6B pencil wrote the words ADDITIVE ARCHITECTURE on the wall, and said we had broken through the sound barrier.'*

(Prip-Buus M. 2009)

*Prototyping:*

Underpinning and supporting Utzon's response to the 'bringing forth' or 'revealing' of architectural intent was his process of design development through prototyping. More usually seen in processes of industrial production in motor manufacture, product design and engineering, prototyping allowed Utzon to finesse complex three-dimensional design proposals producing elegant solutions that could be constructed with efficiency.

**Of Poetic Synthesis:**

Underpinning Utzon's work is a poetic, metaphysical dimension that simultaneously transcends the plurality of this paradigmatic investigation yet paradoxically fuses the elements together. To look up in Bagsvaerd Church as the soft light moves fluidly across the sculpted ceiling is to commune with the deities. To walk down the internal stairways of the Opera House is to be alongside the tumbling mountain streams of Utzon's Nordic world. To sit in in Utzon's living room in Can Lis looking out through the apparently frameless, deep sandstone window bays to the sea and sky beyond is to return to the cave and a core sense of human existence.

Inculcated within such an approach is that, Utzon never lost sight of the experience of the individual, which is always central to his architecture. Whether in the sheltered enclosures of his courtyard housing or the sense of sacral procession up the podium steps of the Sydney Opera House rising up about the everyday experience of daily life to be presented with a grand panoramic overview of the harbour, before entering the halls of the Opera House, sublimely prepared to profoundly appreciate the artistic endeavour taking place within.

Such poetic qualities consistently resonate in the Nordic world. In Art, Music, Literature, Poetry and Film, we find a melancholic and reflective attachment to the metaphysical realm and it should be no surprise that Utzon too inhabited this realm.

While Utzon's output may be considered as being relatively limited in comparison to other architects of his generation, it was however remarkably varied in terms of scale, function and context, but there is nevertheless a clarity, consistency and continual reworking of essential ideas throughout all of his work. It is this possibility to be able to more clearly identify, illustrate and discuss certain significant themes in architecture and design, with reference to Utzon that gives relevance to the Utzon Paradigm; an exemplary pedagogic model for the creative development of students of architecture and a

significant source of inspiration to current practitioners.

### **Of Onward Projection:**

It is to be stressed that we do not see the thematic aspects articulated above appertain to Utzon alone or see his work and approach as being exclusive. As Utzon himself acknowledged, he developed ideas from others, notably Asplund, Aalto, Corbusier, Lloyd Wright, Mies van der Rohe, and Kahn amongst many others, as well the countless anonymous architects and builders of the vernacular architecture that so fascinated him in his travels.

Similarly there are significant architects practicing today who have been either directly or indirectly influenced by Utzon, and whose work demonstrates a continued development of these themes. So there can be seen to be a form for continuity and on-going transference, as well as evolution of certain ideas; very much in keeping with Utzon's own appreciation of the nature of architecture. There is of course significant work produced by practitioners seemingly unconnected to Utzon and it therefore appropriate to examine the Utzon Paradigm in relation to their work and possibly consider other themes, not present in Utzon's canon.

We have, within this Paper, articulated our sense of an appropriate population of the abstract paradigm structure apropos Utzon. We have through expansive interrogation of texts striven to define the elements that might define Utzon's design methodology and characterise his production. However, if this hypothesis is to gain credibility, it must now be tested in Utzon's absence against his archive, now in the guardianship of the University of Aalborg, Denmark. Utzon's archive, comprising, drawings, sketches, notes, letters, photographs, travel journals as well as models and other artefacts, is now at last being brought to together and catalogued. This repository constitutes a significant resource that will facilitate the testing of this and other hypotheses.

We will strive to further test the appropriateness or otherwise of our hypothesis utilising the diverse range of material within the archive, of both realised and un-realised projects. In addition, we are currently developing an 'oral histories' project, interviewing those who collaborated with Utzon which will further support this ambition.

If our hypothesis develops as a credible frame of reference our intention is to subsequently project it towards the design methodologies and realized and unrealized artefacts of other architects who may be considered to also sit outside of the realm where singular theoretical interrogations are appropriate. We intend that these architects should be contemporary (living) in order to test our ideas against not only the contextual materials they provide, but also with the authors of the works themselves.

To engage with a diverse range of subjects we have identified Richard Leplastrier, Peter Zumthor and Raphael Moneo as being appropriate subjects of such a study.

Richard Leplastrier and Rafael Moneo are particularly appropriate choices, given that early in their careers they both worked directly with Utzon, giving him credit in influencing their own subsequent approach to architecture and though differing in the context, scale and character of their own later work; there are nevertheless recurring themes in their respective work that echo Utzon's thinking and design approach. For both Leplastrier and Moneo, there is a timeless reworking of past, often ancient and transcultural architectures, a concern for responding to and heightening the experience of the physical context; often with an Utzon-like implementation of the platform. This is combined with a focus on honest materiality and the making of architecture in a craft sense, with a clear logic and tectonic integrity of construction. As with Utzon the poetic narrative of the experience of a building is paramount.

Peter Zumthor is also a very relevant comparative case-study, by which to test the principles of the Utzon Paradigm, in relation to an architect that has

not necessarily been directly influenced by Utzon, but exhibits parallel tendencies to many aspects of Utzon's background and approach. Zumthor, like Utzon and Leplastrier is strongly grounded in a craft tradition; for Utzon and Leplastrier it was boat-building and for Zumthor it was furniture making, that gave them a profound understanding of working with materials and an appreciation for the importance of details; not only with regards to optimum tectonic resolution, but also most significantly in relation to human bodily experience and what Zumthor describes as 'Atmospheres'.

Informing the work of these three architects is an inherent tectonic and phenomenological understanding of architecture; this is reflected in their respective fascination and varying interpretations of the archaic and timeless, often returning to analogies to the cave and in the case of particularly Leplastrier the primitive hut, the very origins of architecture and dwelling in a Heideggerian sense. Theirs is not architecture of the purely visual and superficially gratifying, but one that affects all our senses and one responds to at a deeper existential level, satisfying as Pallasmaa suggests

*'The timeless task of architecture is to create embodied existential metaphors that concretize and structure man's being in the world.'*  
(Pallasmaa 1994)

### **Conclusion:**

Central to the hypothesis described within this Paper is an intuitive sense that the paradigmatic frame may provide a lens through which the influences, methodologies and outputs of architects that may be categorised as 'non-theoretical' may be viewed and discussed. We contend that such a possibility would liberate architecture discourse from the often binary and banal analysis, that in our view often misses the more subtle and intangible dimensions of architecture, particularly within the realm of what we might more generally term 'phenomenological architecture'.

This approach extends beyond the classic classification of architectural theory into a complex realm of interconnected relationships. Our hypothesis is that the paradigmatic framework might provide a dimensional, embracing and appropriate methodology for such studies.

We contend that such an approach holds the potential to influence the pedagogy of architecture in developing a holistic understanding of architecture that shifts the balance towards the *acts* of architecture rather than the *objects* of architecture. Such potential may at least in-part act as a counterpoint to the emerging trend in architecture that engages almost exclusively with form and image.

# FOURTH INTERNATIONAL UTZON SYMPOSIUM – SYDNEY AUSTRALIA

## WHAT WOULD UTZON DO NOW?

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### Notes

Bunt. R. *'Techne, Technites, Tekton, Tectonic: Thoughts on Heidegger's Thinking on Thinking in Architecture'* (unpublished).

Utzon. J. *'The Essence of Architecture'* (1948) in Ferrer Forés, J. *'Jørn Utzon – Works and Projects'* (2006) Editorial Gustavo Gili SL. Barcelona. Spain.

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Prip-Buus. M. *'Additive Architecture.'* (2009) Edition Bløndal. Denmark.

Pallasmaa. J. *'Architecture of the Seven Senses.'* (July 1994) A+U. Tokyo. Japan.