

# Revisiting Utzon's Bagsværd Church

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**B**agsværd Church is one of Jørn Utzon's most important buildings in Europe and the first major public building he completed after the Sydney Opera House. It was therefore given considerable international attention on its completion and quickly canonized by leading architectural critics, most importantly in *Towards a Critical Regionalism* by Kenneth Frampton as the example par excellence of "a self-conscious synthesis between universal civilization and world culture."<sup>1</sup> The understanding of the church in reference to the regional culture has ever since been common, and although different in scope the various interpretations all emphasize this as the governing characteristic. That culture, however difficult to define, plays undoubtedly a central part in design. Despite its apparent importance such interpretations also suppress other equally significant aspects of the building, like sacred functions, linkage to other cultures and local impacts. These and other key aspects of the church are discussed here to broaden and refine the understanding of the church in relation to notions of place. The analysis falls into three sections that focus on the exterior, the plan arrangement, and the

ceiling of the building. It will question the time-honoured view of the church and explore it in a larger architectural context that goes beyond regional connotations.

The creation of Bagsværd Church took nearly ten years, a process catalysed by an architectural exhibition in Gladsaxe, Denmark, in 1967, where Utzon included a competition project from the preceding year for Farum Town Centre, which had a church. In the period when the exhibition was shown, the congregational council in Bagsværd, where there had been no church since 1537, was working to have one built. Against the background of the exhibited competition project the congregational council contacted Utzon and asked whether he was interested in drawing up a proposal. He accepted and presented a proposal the following year that comprised two often published sketches, one with a group of people under the clouds on a beach, the other with people in procession towards a cross below a vaulted ceiling. The sketches illustrate how he explained the overall concept for the project. Five years were to pass before building permission was granted in 1973 and construction began.<sup>2</sup> Another three years later, on August 15<sup>th</sup> 1976, Bagsværd Church was consecrated.



Bagsværd Church exterior facade. Photograph: Michael Asgaard Andersen.

## Dematerialization of the Facade

Bagsværd Church is located in a residential suburb of Copenhagen with detached houses on one side and a busy road on the other. The approach to the building is by a small side road along a lawn that surrounds the whole church and on which, as in the Fredensborg Houses, large boulders have been placed. All the way round the building grow birch trees, which establish a visual buffer zone against the surroundings and whose white trunks match the white surface of the facade. The movement of the wind through the birch leaves creates a transitory play of light and shade on the facade, which dissolves the mass of the building volume and blurs its contours as in an Impressionist painting. The fluctuating light-effect of the trees on the facade is part of dematerializing the outside of the building.

The exterior of the building facilitates a number of potential interpretations in relation to traditional Danish churches. The changing height of the facade is marked by frames, which define the size of the interior spaces. The highest frames appear as two towers, similar to traditional churches of this type. The frontal view of the towers is, however, played down by the corner position of the entrance off the main axis. Thus, on approaching, one also sees the long side of the church with its stepped cornice, which is another traditional mark of many churches. The long sides link the sacred and profane functions of the building into a unity of expression. The structure-providing repetition of the frames promotes a sense of continuum on these two sides.<sup>3</sup> The frames are formally related to Chinese construction types and Japanese *torii* gates, and show Utzon's increasing interest in traditional Far Eastern architecture through the 1960s. But the constructional principle of the facade can also be understood in relation to Nordic building culture.

The exterior facade consists, besides the frames, of prefabricated elements that are attached from the outside. The construction has been linked to Danish half-timbered houses, but seems to be closer to the tradition of the bole houses.<sup>4</sup> As Mogens Clemmensen describes, the bole houses are built up of wooden columns with vertical grooves, in which broad planks are stacked.<sup>5</sup> As in Bagsværd Church, the vertical and horizontal building elements hold one another in a mutually static relationship, where they complement and are designed to each other. The construction in Bagsværd

Church can thus be seen as an extension of regional traditions, in reference to other building cultures, and as an expression of the building methods of the time. It contains many of the ideas of the unrealized proposal from a few years before for Utzon's house in Bayview, Australia that in the final draft has a similar expression, although different in mode of construction. In both cases, the facade element is a finished building part, which can be assembled on site without further reworking.

As in the Sydney Opera House, the outside cladding of Bagsværd Church appears with alternating matte and glazed surfaces, where the latter type has vertical subdivisions. The lustrous surfaces give the building visual depth, and the transitions between matte and glossy elements mark out the contour of the ceiling inside in abstract form. This mapping expresses a dialogue between inside and outside, where on arrival one has no more than a premonition of the relationship that is to be revealed in the encounter with the interior. It interweaves an exterior facing the profane surroundings with a sacred interior and adds yet another layer to the depth effect of the facade.

The tensions set up provide the exterior of Bagsværd Church with an ethereal quality. Transient light and shade effects on the matte and glossy cladding give simultaneous impressions of dissolution and depth. The experience is intensified by the interplay of the repetitive elements and the sense of continuum. Thus the impenetrable outside of the church is dematerialized and the building is emancipated from its surroundings.

## Universal Plan

Like the exterior of the building, its ground plan finds resonance in a wide range of religious and secular buildings. Besides the church itself the building also includes chapel, congregation rooms and administrative offices. The functions are laid out successively so that together they make up a unified building volume. The frames along the facade and across the building establish narrow zones, which in the actual church interior form the side-aisles, while in the other parts they function as corridors. As Françoise Fromont points out, a reference to the plan arrangement can be found in some of the building types published in Johannes Prip-Møller's book on Chinese Buddhist monasteries.<sup>6</sup> Common to the monasteries and Bagsværd Church is the

strictly modular structure and the organization around courtyards, which run as extensions of one another with narrow corridors between them and along the edge.

As well as Chinese Buddhist references, the courtyards in Bagsværd Church also have features in common with those in Gunnar Asplund's Holy Cross Chapel from 1935–40 at Woodland Cemetery in Sweden. Utzon became familiar with it during World War II, when he worked for Hakon Ahlberg and Poul Hedquist, who were both well acquainted with Asplund. The courtyards in Asplund's building mediate between the smaller chapel spaces as well as between the open landscape and the interior. In Bagsværd Church the courtyards have a similar spatial function and also let daylight into the adjoining rooms.

In the early drawings and a wood model of Bagsværd Church the floor slopes from the entrance down to the altar, as is also the case in Asplund's chapel and Sigurd Lewerentz's Sankt Petri Church.<sup>7</sup> Asplund's and Lewerentz's sloping floors concentrate the attention on the altar and anchor the building in the terrain. In the later development, the floor of Bagsværd Church becomes flat and is executed in white concrete elements. Whatever the reasons for this change, in its realized form the floor has an autonomous character that frees itself from the surrounding terrain, achieved predominantly by the expansive grid and prefabricated expression. The floor emerges as a universal ground plane, whose only relation to the terrain lies on the threshold between inside and outside. At the exterior, the base of the building is hidden by a built-up sloping terrain or penetrated by window openings. The relation to the site, which Utzon expresses in many other projects by means of an earthbound platform, has here been set aside in favour of a level plan without a similar anchoring.

The repeating floor elements are proportioned in accordance with the overall modular system of the building, determined by a module size of 2200 mm in plan and 420 mm in height. Within this are the four overall functions of the building also inscribed, each forming a square in the plan arrangement. In the chapel with forecourt the square is 6x6 units, while in the church, congregation rooms and administrative offices it is 10 x 10 units. The proportions and divisions are not uncommon, but, as will be shown here, in this context they bear a striking parallel to the Old Testament guidelines for tabernacle and temple construction.

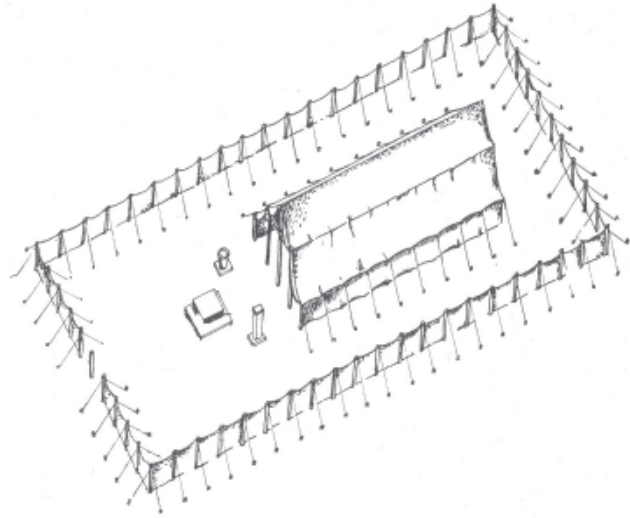


Illustration from *Towards a New Architecture*. First published by Le Corbusier: "Les Tracés Régulateurs" in *L'Esprit Nouveau* 5, p.565. According to Mogens Krustup, it was based on drawings in Reinhold Freiherr von Lichtenberg: *Haus Dorf Stadt* (Leipzig, 1909) pp.18–19.

Of the footprint of Solomon's temple, it is said that "the length thereof was threescore cubits, and the breadth thereof twenty cubits,"<sup>8</sup> and that there was also a forecourt. Without the forecourt this gives the proportions 1:3, corresponding exactly to the proportions in the ground plan of Bagsværd Church of 22 x 66 metres without the forecourt and chapel.

Exodus 26 gives the general guidelines for the building of a tabernacle. The area of the tabernacle is determined by twenty boards in length and ten in width, which gives a double square, or what corresponds to two squares of 10 x 10 units each. Exodus further prescribes that "for the sides of the tabernacle westward thou shalt make six boards."<sup>9</sup> Six is precisely the number of units on the west-facing chapel in Bagsværd. The tent curtains of the tabernacle between the priesthood and the congregation have its counterpart in the semi-transparent altarpiece screening of Bagsværd Church, and the central position of the altar matches the placement in the unrealized, published drawings of it. Given Utzon's interest in ancient civilizations and his acquisition of a considerable body of literature about them, the close relationship between Old Testament building prescriptions and Bagsværd Church is remarkable.

In *Towards a New Architecture* Le Corbusier shows drawings of the tabernacle (the primitive temple) described in the Book of Exodus.<sup>10</sup> In it one sees how cloth is stretched out as the above-mentioned boards to form the wall and tent. The structure of the latter and the geometry of the double square has been interpreted as an inspiration for Le Corbusier's Ronchamp Chapel.<sup>11</sup> Utzon's interest in tent structures is seen in the choice of an introductory illustration for the essay written with Tobias Faber in 1947, and not least in the great overhanging roof towards the sea in the Kuwait Parliament from 1972–82.<sup>12</sup> The ceiling of Bagsværd Church, which is discussed below, also has a strong similarity with the hanging lightness of tent cloth and could equally be understood in connection with the building traditions of the Middle East, as the Old Testament temples.

The relations to Buddhist monasteries, Asplund's chapel and Old Testament temples point to both possible sources of inspiration and suggest ways to understand Bagsværd Church today. They are however only a few of the references that the building emanates. In this respect the church could be considered an open work with the potential for multiple and even conflicting readings and re-readings of it. This does not exclude the understanding of the church in regional terms, as that is just one of several notions in which to interpret it, even if these interpretations are contradictory to one another. The parallels to monasteries, a chapel, and temples discussed here emphasize aspects of Bagsværd Church that could be characterized as cross-regional, in that the church synthesizes disparate building cultures into a whole. Although similar characteristics might be found in other kinds of buildings, those analysed qualify the church as a religious building, as they also in part decontextualize it from a Protestant tradition.

### Geometry of Infinity

The key concept that Utzon was showing in his two sketches for Bagsværd Church is expressed by the ceiling, from which a sensation of infinity emerges. The ceiling spans the whole width of the main space and ascends dramatically from the entrance, where it is low, upwards over the altar. Where the ceiling is highest, there is a window opening to the west across the whole width of the space, letting daylight in and accentuating the verticality of the space. In the forenoon, when most church services take place, the space is lit up by

the light from the sky without any direct sunbeams. The indirect light is reflected on the curved surfaces of the ceiling and gives the interior a soft, graduated light that is strongest around the altar. This is supplemented by skylights in the side-aisles, through which one can only look up at the sky, and electric light fittings along the periphery. The combination of a predominantly indirect light and the lack of any view of the terrain reduce interaction with the surroundings.

The light materializes in the curved forms of the ceiling, which contrast the level floor. Like the rest of the building, the ceiling is constructed in concrete, but while many of the other parts are prefabricated, it is moulded on the spot. The straight planes of the roof loosely comply with the curvature of the ceiling in a cascade of smaller roof surfaces. Utzon made a similar unrealized cascading roof across the other spaces of the church in the wood model, and a few years before this in the first drawings for his own house in Bayview.

Inside, the ceiling of Bagsværd Church is white, conforming to the delicate palette of light-grey and white colours that are characteristic to the whole building. Just as Utzon exemplifies the static properties of the concrete with folded paper, he also compares the white surfaces of the building to the richness and beauty of paper.<sup>13</sup> Throughout the building the various kinds of concrete have their special colours and surfaces, some elements have for example crushed white marble filling, which gives them a radiant surface. The fittings are mainly in white-stained Swedish pine and clearly expressed as applied on to the primary construction. The tectonic application, along with the white lightness of the church interior, reflect two important sources of inspiration, Lewerentz's Sankt Petri Church and traditional Japanese architecture, both of which Utzon urged the client to visit during the design process. The use of the same few materials in Bagsværd Church and the subdued colour scheme let the interior be an unobtrusive background for what is happening, whether sacred or profane events.

Throughout the building Utzon works with elementary geometric forms. In the wood model of Bagsværd Church the ceiling of the interior is formed from continuous overlapping curves. In the further elaboration of the project, the curved shapes are inscribed in a geometry where they all become parts of well-defined circles. Utzon's fascination with spherical and circular geometry came to expression in



Bagsværd Church interior ceiling. Photograph: Michael Asgaard Andersen.

earnest after he worked out the solution for the shells of the Sydney Opera House in 1961. This interest can also be seen in his design for the same building's concert halls, where convex circles shape the space and regulate the acoustics. The acoustic properties of convex forms recur in Bagsværd Church, but while the geometry of the Sydney Opera House is determined by the desire to prefabricate the construction elements *en masse*, in the church there is no similar rationale, since the ceiling was moulded *in situ*.

In the ceiling of Bagsværd Church the variations on concave and convex surfaces and their different radii establish a form that approaches infinity, like those known from Baroque architecture. Frampton points out two other Baroque traits in

the church: the treatment of daylight and the (partial) illegibility of the ceiling vaults from the outside.<sup>14</sup> In the ceiling Utzon's fondness for a clearly constructive idiom is subjugated to the will to work with the daylight in the suspended concrete folds. This results in an interplay of geometry, matter and light that creates a distinctive unity. The shifting play of light on the recessive white surfaces renders the transience suggested by the clouds in the early sketches, while the repeated circular vaults extend towards infinity. This provides for an experience of being both spatially and spiritually moved, and overrides the sense of being bound to the specific site.

## Transcendent Place

Utzon's visits to and studies of a wide range of contemporary and ancient building cultures have had an important impact on his design of Bagsværd Church. Social, cultural, and architectural impulses have been mediated and interpreted during the design process, which make the building appear with its own consummate expression. In formal terms basic Euclidian shapes are used throughout, for example in the triangulated altarpiece screening, the circular ceiling, and the squared plan. The forms are known from most ancient civilisations and take on different connotations in each one of them. In the church, they create a complex set of references. The geometric forms do not only parallel sources of inspiration and propose interpretations; they also provide the building with a universal character. Thus Bagsværd Church expresses an open and inviting attitude towards its congregation and other visitors.

The church synthesizes a multiplicity of local, regional and global traits forming a rich architectural manifestation. Characteristics of the particular region and other disparate regions give it a cross-regional quality with interplays of similar and contrasting elements. This does not expel the

relation between regional and universal suggested in Critical Regionalism. Instead it adds to that and other regionalist understandings by underlining the tensions between the various aspects of the different regions. Equally important in this regard is the usage of precise local means, discussed in relation to the exterior, which create a further friction to the surroundings. As a result there is a dialogue between site-specificity and decontextualization that involves aspects of the minute local, the cross-regional and the global.

The church establishes a place that is simultaneously anchored in and emancipating from its site. The anchorage happens in a number of ways, due in part to the climatic and topological conditions, modes of construction and the ongoing secularization of church buildings at the time. By virtue of the distinctive architecture, the building also exceeds far beyond its site. The dematerialization of the facade, the universality of the ground and the infinity of the ceiling are among the most significant reasons for this release. The many references that emanate from the building also contribute to this experience. Jointly this gives Bagsværd Church intense presence and makes it a transcendent place.



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## Notes:

1. Kenneth Frampton: "Towards a Critical Regionalism" in *Labour, Work and Architecture*, p.83.
2. On this process see Bernhard Willer: "Erindringer om Bagsværd kirkes bygning og fuldendelse" in *Årsskrift 1977* (Glad-saxe, 1977) pp.5–21, and Svend Simonsen: "Der var engang: Brudstykker af Bagsværd kirkesags historie" in *Bagsværd Kirkeblad* (1976) pp.6–7.
3. In an early plan drawing the most eastern part of the building is literally shown as a possible extension.
4. The half-timbered building is suggested by Richard Weston in *Utzon*, pp.294–95.
5. Mogens Clemmensen: *Bulhuse. Studier over gammel dansk træbygningskunst* (Copenhagen, 1937).
6. Johannes Prip-Møller: *Chinese Buddhist monasteries. Their plan and its function as a setting for Buddhist monastic life* (1937), (Copenhagen, 1967); and Françoise Fromonot: "Jørn Utzon, Un ricordo delle Hawaii" in *Casabella* 649 (1997) pp.30–32.
7. The early wood model is in Køge Museum, Collection of Sketches in Denmark.
8. Kings I, 6:2.
9. Exodus 26:22.

10. Le Corbusier: *Towards a New Architecture* (1923), (New York, 1986) pp.69–72.
11. See Mogens Krustrup: "Le Corbusier og Anthemios fra Tralles" in *Arkitekten* 20 (1985) p.452.
12. Jørn Utzon and Tobias Faber: "Tendenser i Nutidens Arkitektur" in *Arkitekten* 7–9 (1947) p.63–69.
13. Utzon interviewed by Poul Erik Tøjner in Michael Juul Holm, ed.: *Jørn Utzon. The architect's universe* (Humblebæk, 2004) p.14.
14. See Kenneth Frampton: *Studies in Tectonic Culture*, p.288.

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