

The Poetics of Light

M. FREDRIKSSON

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Lars-Henrik Ståhl / Tutor Marit Lindberg

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Foreword

What brings poetry to architecture? Wherein lies the difference between the mere built and the magical? As the connection to the surrounding universe is unarguably linked to the sensation of space, is the grandeur of every great work of art hiding in the fact that they seem different to us every time we experience them? Is this because they are?

To me, this thesis has been an exploration of a fascination with light and its impact on the built that I have previously merely sensed. An instinctive notion of a powerful presence of place, linked to the treatment of the natural elements in general and light in particular. Much of the work has consequently evolved around a wish to concretise such sensations, and communicate that which is highly subjective.

It has been a reminder that all things poetic, all things inventive - significant, if you will - in the perspective of human existence, are dependent on the sensation of responsive minds and spaces. The sensation of being part of a larger picture, and connected to it - however lightly - by our bodily experiences. The poetic, in the situationalist's interpretation and

in the words of Raoul Vaneigem *'is the organiser of creative spontaneity to the extent that it reinforces spontaneity's hold on reality. Poetry is an act which engenders new realities: it is the fulfilment of radical theory, the revolutionary act par excellence.'*

The way light brings poetry to architecture is equal parts hard work and pure magic. This ancient knowledge has been forgotten, however, slowly rationalised after the invention of artificial light and capitalism. Today we find ourselves with architecture built for monetary growth, neglecting the characteristics of the human condition.

The poetic possibilities of light could - perhaps *should* - be the artistic dimension we have been ignoring that we have forgotten, and the slow revolution we've been waiting for.

The following pages are descriptions of subjective emotions and experiences, and should be considered as such. I am glad to invite you on this journey of the built.

Mikaela Fredriksson, Stockholm, August 2017

The Poetics of Light

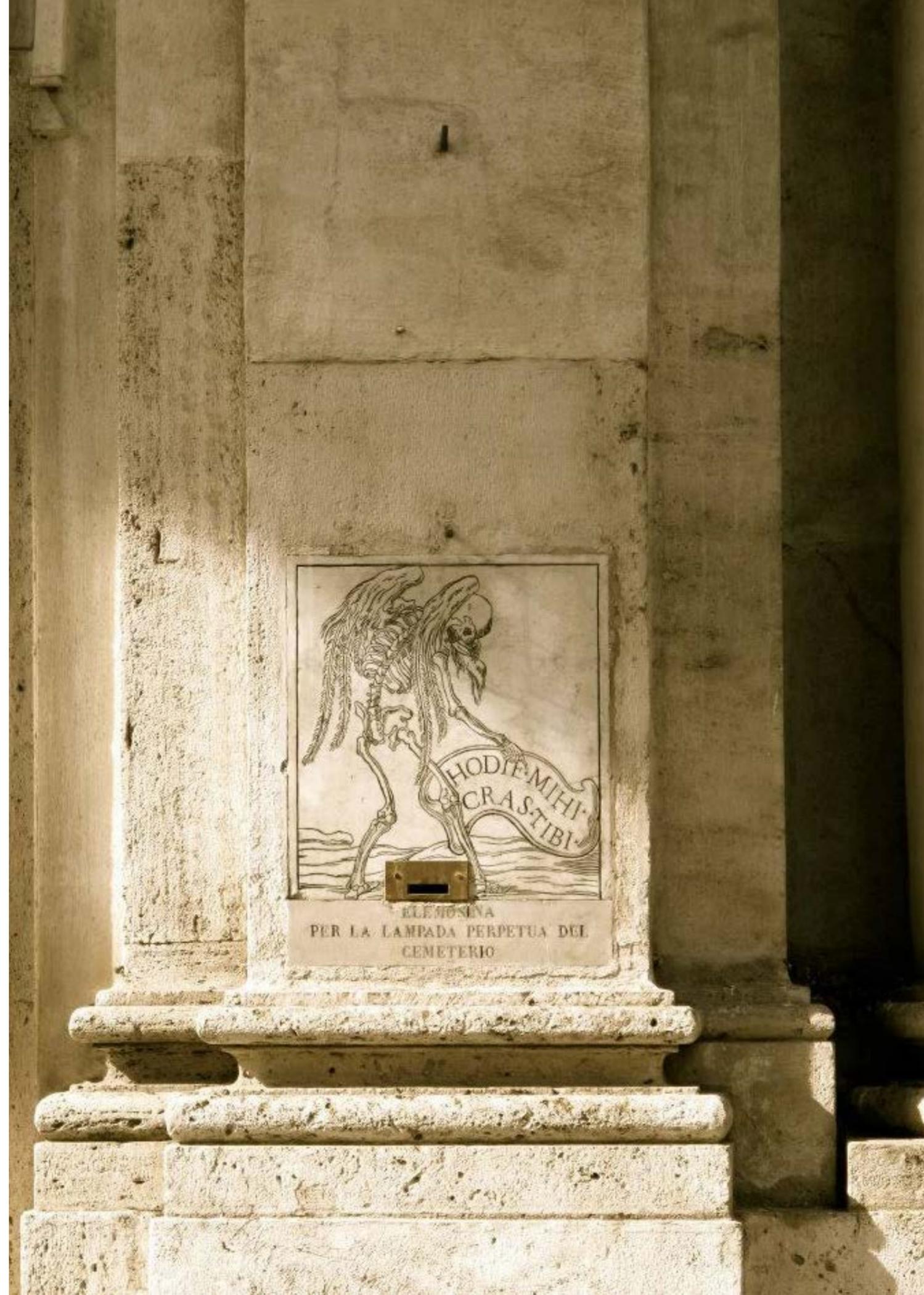
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The Poetics of Light

'Light is the origin of all being. Light gives, with each moment, new form to being and new interrelationships to things, and architecture condenses light to its most concise being. The creation of space in architecture is simply the condensation and purification of the power of light.' Tadao Ando [1]

Light, not merely being the root to all life as we know it, but from a human point of view maybe even more importantly, being the foun-

dation of all interpretation of and communications with the world around us, has been stated the most important architectural component by more than a few renowned architects. From the soaring boxes of Le Corbusier to the modern monoliths of Louis I. Kahn, from Zumthor's caves to SANAA's clouds they have all been the result of the architects' attempts to design with and for natural light. Whether or not we agree with Tadao Ando that *'the creation of space is simply the condensation of [...] light'*,





Cedar floor at Church of the Light, Osaka

we must all recognize that we live because of it. Consequently, every culture has had its own ways of adapting to and making the most out of the light conditions of its specific region.

Architecture, as the ancient link between human creation and the surrounding universe, is at its best the result of the specificity of the site, and at its worst still under the mercy of its conditions.

Considering this, it is remarkable how little atten-

tion the practice is given in the popular discourse of architecture in our modern times. In her thorough book *The Architecture of Light*, architect Mary Ann Steane explores ten diverse examples of what is considered modern architecture, where natural lights is used as a deriving force. From Le Corbusier to Herzog and de Meuron, her analyses on '*day-lighting in the era of electricity*' are as insightful as comprehensive. [2]

On the subject, architecture professor and photog-



Meiji Shrine, Tokyo

rapher Henry Plummer has also contributed greatly with several published books discussing light and the built.[3] His beautiful pictures and personal language should be an inspiration for architects worldwide, as a means to communicate the potential of architecture far beyond the borders of the profession.

With the exception of some noteworthy examples and believers, the discussions - and consequently the writings - on architecture and light seem to me

to be increasingly scarce amongst the new generation of architects emerging. This is my generation, and we are risking confusing *meaning* with *means*. Maybe it is the restlessness of today's society, maybe the need for constant economic growth. Or maybe it's just the fact that slow virtues, like the movement of the sun on a wall, has gone out of style in these first few years of the third millennium of man. Are we really so caught up in the nonsense of everyday life that we have forgotten how to watch the setting sun? Could it ever be worth it?



Church of the Light, Osaka

Light, in its essence, is a slow business. It takes time, effort, and practice to understand it. It takes long hard years and slow summer days, harsh February afternoons and fleeting sunsets by the lake to build up an intuitive feel for the endless possibilities of light. It is arguably the origin of all form, and it is the work of a lifetime.

Peter Zumthor likes to talk about *'the light on things'*^[3] in his lectures and Le Corbusier called it

'the fundamental basis of architecture', claiming that what he was really up to all those years was *'composing with light'*.^[4] Tadao Ando states that *'the creation of space [...] is simply the condensation [...] of the power of light'*,^[5] while Louis Kahn said it shorter, by simply stating that *'light is the giver of all presences'*.^[6]

True as this might be, one can also argue that architecture still exists in the dark. Ask the blind (or



St Peter's Basilica, Rome

Peter Zumthor for that matter) and they will tell you of the rustling of a tree, the familiar sound of a kitchen floor or a set of stairs, the cool feel of a door handle. Ask Juhani Pallasmaa, and he will tell you that *'every touching experience of architecture is multi-sensory; qualities of space, matter and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton and muscle.'*^[7]

Be that as it may; as the root of all existence, this

thesis examines the inevitable relationship between natural light and the built. Light, as the creator of all presences, and in turn architecture - mass, form - as director of that light. Creator of shadows, and those shadows as a worthy counterpart to the conditions of light. And finally, the exiting moment in space and time where light and darkness collide, in an ancient drama that never ceases to amaze us.

From the dominating roofs of the architecture of *sky*

to the reflecting powers of that built of *matter*, the alluring borderlands of spaces cast in *shadows* and the powerful presence that is the result of the architecture of *sparse*, the content of this thesis evolves around the poetics of light.

The poetic, in the situationalist's interpretation and in the words of Raoul Vaneigem 'is the organizer of creative spontaneity to the extent that it reinforces spontaneity's hold on reality. Poetry is an act which engenders new realities: it is the fulfilment of radical theory, the revolutionary act par excellence.' [8]

The *Poetics of Light* as a possible way out, a reminder that all things poetic, all things inventive - *significant*, if you will - in the perspective of human existence, are dependent on the sensation of responsive minds and spaces.

The poetic as the artistic dimension we have been ignoring that we have forgotten, and the slow revolution we've been waiting for.

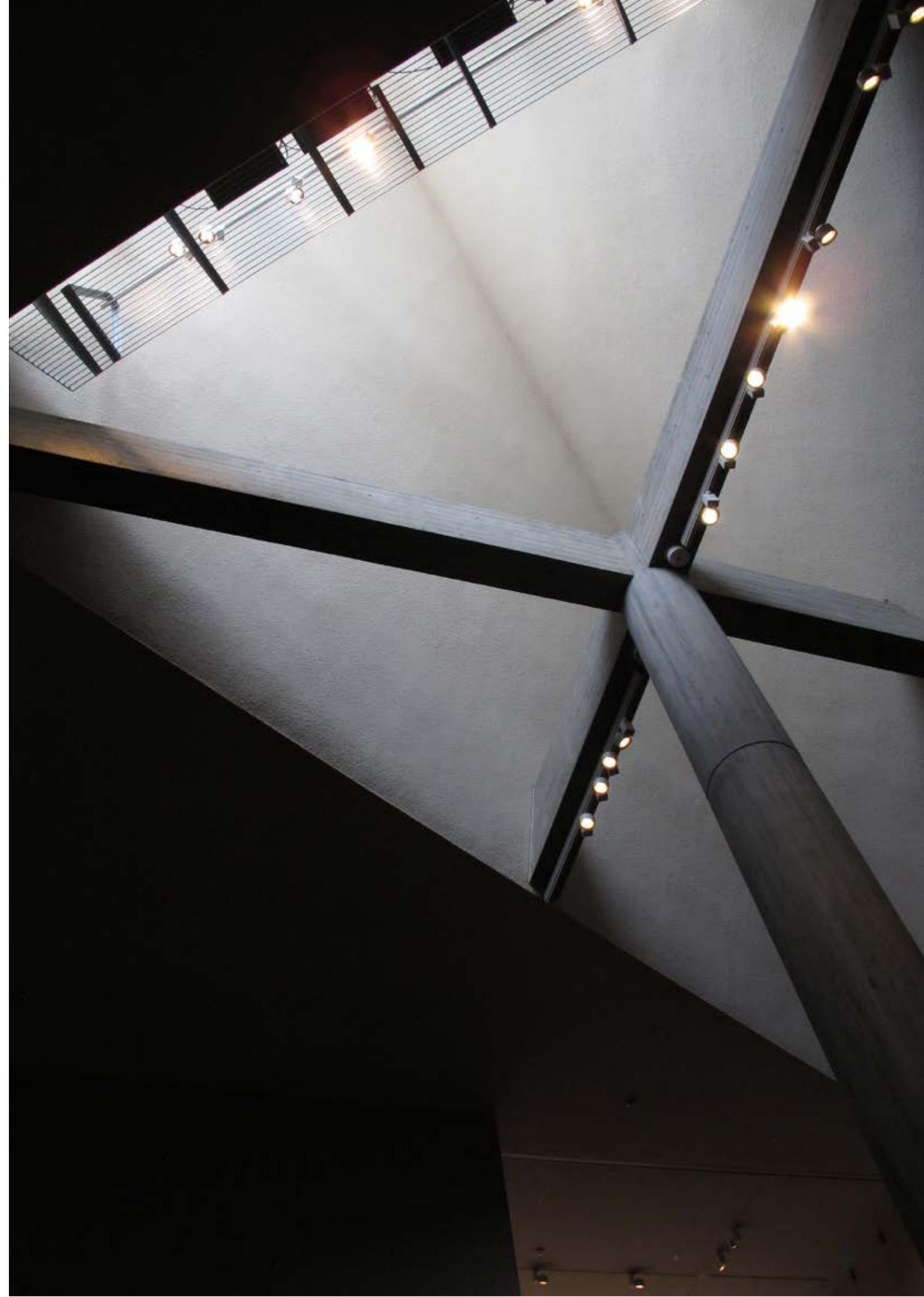
The endless possibilities of the built, through the endless possibilities in light. And as a consequence, the importance of an architecture firmly rooted in its environment. Because

light must also be seen as a critical aspect of place. Light, in a sense, *is* place. From the burning sun of Kyoto, to the horizontal Nordic winter light, the hovering light of Venice, and the overcast London sky. From the Japanese autumn rains or the long summer nights of the North, nothing is more site specific, generating or dominating than the conditions of light. The root and source of everything that has, is, and ever will be.

After all, even Pallasmaa said eye first.

For an architecture that captures and considers the fluidity of light throughout the days, the months and the years to come is inevitably of both its place and its time. And an architecture that is of its place and of its time will be firmly rooted and of relevance for many years to come. Therefore, it is also timeless. And there is nothing more revolutionary, in this age obsessed with monetary growth and commercial greed, than that which lasts.

This, I believe, is the true meaning and inherent power of an architecture involved with the poetics of light. This thesis explores the subject further.



References

- [1] <http://into-the-fashion.com/25759/architecture-church-of-the-light/>, 2017-01-07
- [2] Steane, Mary Ann, *The Architecture of Light*, Oxon:Routledge 2011, 1-7
- [3] Zumthor, Peter, *Atmospheres*, Basel:Birkhäuser, 2006, 57
- [4] Steane, Mary Ann, *The Architecture of Light*, Oxon:Routledge 2011, 9
- [5] <http://into-the-fashion.com/25759/architecture-church-of-the-light/>, 2017-01-07
- [6] <http://www.archdaily.com/362554/light-matters-louis-kahn-and-the-power-of-shadow>, 2017-01-07
- [7] Pallasma, Juhani, *The eye of the skin: Architecture and the Senses*, Chichester: Wiley, 1996, 41
- [8] <http://library.nothingness.org/articles/SI/en/display/66>, 2017-09-10

SKY

The Light from Above

What does it mean to be beneath the sky? One could argue that it means to be human, as it is a significant part of the human condition, finding oneself here on this planet, between earth and sky. It is where we were born and where we live our lives. It has been our map and our compass, our calendar and clock. It has also been both saviour and executioner, as living under the sky has meant being at the mercy of the moody weather gods. The light from above is the one reason we are here, the root of every equation. It is a live manifestation of general location and current weather conditions, telling us time of day and year instantly. Put a person

in a windowless space - a shopping mall or a parking garage - and it won't be long until she has lost all sense of direction and time. Put her instead in a skylit room, and she will soon be aware of her place in the universe.

In architectural terms one can see technical reasons for the skylit room, such as directing daylighting and appropriating it for certain lighting demands. In museums, libraries and classrooms, the shadowless light and the undisturbed views has many advantages. With the broadening of the approach to sustainable architecture however, the trend of less and less





Roof curvature at the Bagsvaerd Church, Bagsvaerd

daylight in official and public buildings have finally been broken, as many new designs aim to seamlessly unite natural and artificial light, making sure to make the most out of the natural resources available.

But there are also metaphorical and quite poetic motives behind an artificial sky. In his seminal text *Building, Dwelling, Thinking* from 1954, the German philosopher Martin Heidegger spoke of human building and dwelling as being in essence the same. The groundbreaking text created an echo through the entire field of architecture, by stating that the words *building (Bauen)* and *dwelling (Wohnen)* originates from the same German word, *Buan*, which translates into *staying* and *dwelling*, and is also the root of the verb *being (bin/bist)*. Though this semantic reasoning he concluded that, philosophically speaking, *being, dwelling* and *building* share the same origin and consequently that to be mortal is to dwell on this earth, under the sky, awaiting signs from the gods above.[1]

Miguel de Beistegui summarises it elegantly in his *Thinking with Heidegger: Displacement*:

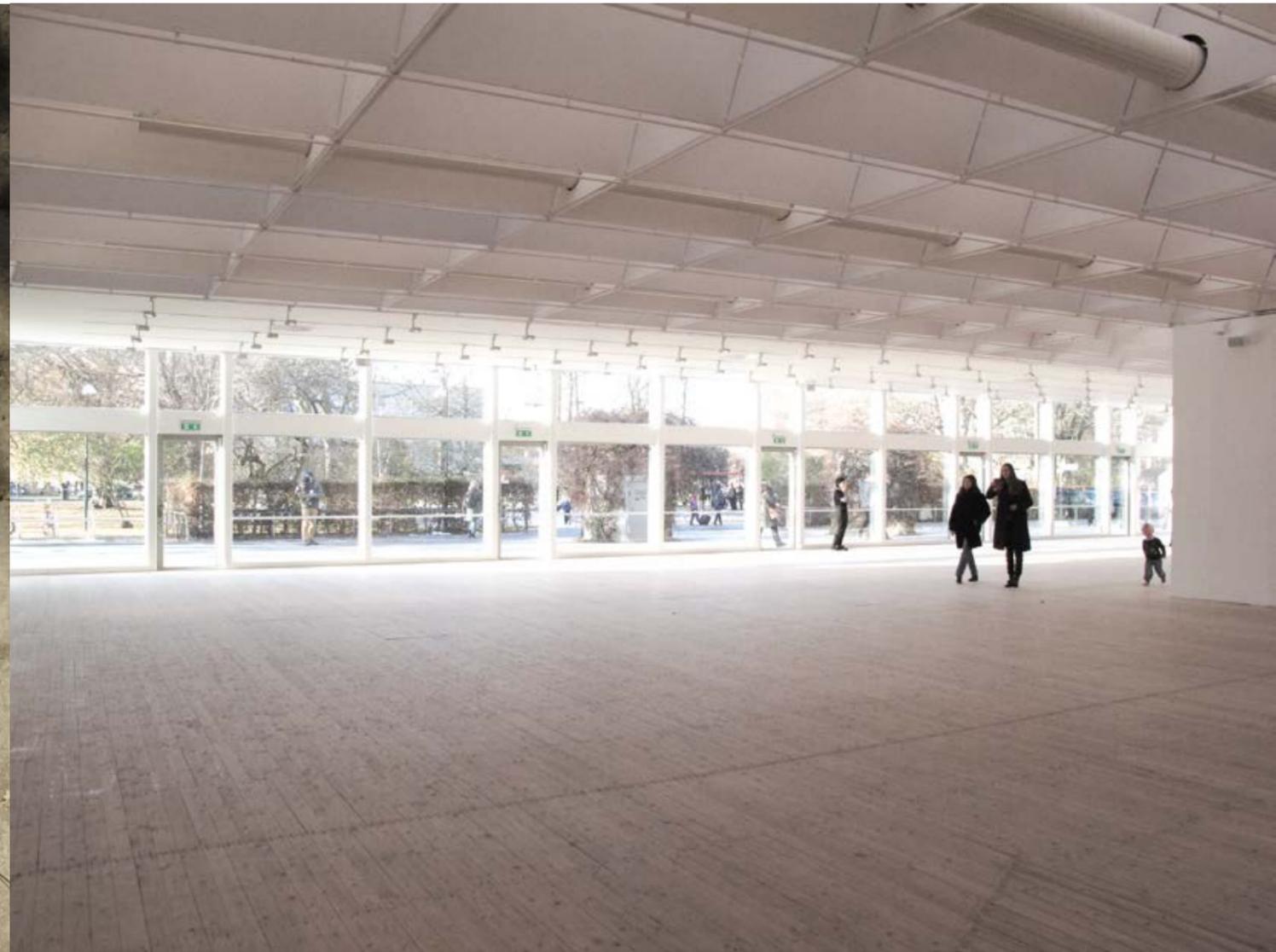
'Dwelling, Heidegger goes on to say in 'Building, Dwelling, Thinking' is born of this need to find our place on earth. And this place, this place to which buildings open up, is precisely 'on the earth' and 'under the sky', 'before the divinities' and 'before our own mortality'. Our sense of place, of where we belong, is intimately bound up with this fourfold horizon.'[2]

Heidegger's words sent ripples through the world of architecture, as *Building, Dwelling, Thinking* became one of the most influential architectural texts of modern days. The ideas also present a clear connection to the built examples we are about to examine closer. An early sketch of Jorn Utzon's shows a shepherd and his herd beneath a stormy sky. The concrete roof of The Bagsvaerd Church makes the church room itself a courtyard, open to the skies and the changing light. The inward-turning church is by this elegant gesture instantly

connected to the surrounding cosmos, and in that sense simultaneously secluded and endless. Sverre Fehn blended local Italian marble into the mixture of his elaborate concrete roof slabs of the Nordic Pavilion of the Venice Biennale, as to dilute the bright Italian light, diffuse it, and bring a bit of Nordic overcast skies to Venice. And even if Klas Anshelm himself spoke rationally of his lanterns as *'reflectors on a work lamp'* [3], anyone that has been to his Malmö Konsthall can testify to the qualities of daylight in the building, and its powerful, poetic presence in the mostly empty room. By crafting the lanterns with the greatest attention to detail, he produces - in an otherwise confirm box - a universe in itself between earth and sky. Situated between soft wooden floors and the light above, art and ideas - like human kind - can exist, and orient themselves, in time and space. This was on occasion stated by Jorn Utzon, whom upon visiting the exhibition hall sent a message to the architect: *'What a wonderful art gallery you have made. I wish I were a painter and was going to exhibit here... but I have to be satisfied with the profession of an architect...'* [4]

As an ever present, ever-changing condition of life, we find ourselves between earth and sky. This is our habitat, our place in the universe. The architecture of *sky* helps to remind us of that.





MALMÖ KONSTHALL (1975)

Klas Anshelm and the Potential of the Shed

The light is already there when we arrive that Sunday morning in November. Approaching from different directions and a minute apart, the light has beat us there, inhabiting the empty open space - pouring down from the ceiling lanterns and flooding the floor. Coming to this place from who knows where and who knows when, sifted through dust and clouds and atmosphere, it is already there when I hurry passed the glazed double doors to the sick-

ening beat of my treacherous heart. Passing the low, concrete facade with its horizontal lines, the sunny wooden bench and the modest canopy that only almost has you convinced it is a threshold, this thin membrane between city and art always reminds me of osmosis. Permeable borders are the most beautiful, and the hardest to define. And yet the contrast between the long, low exterior of the unspectacular building and the interior universe it

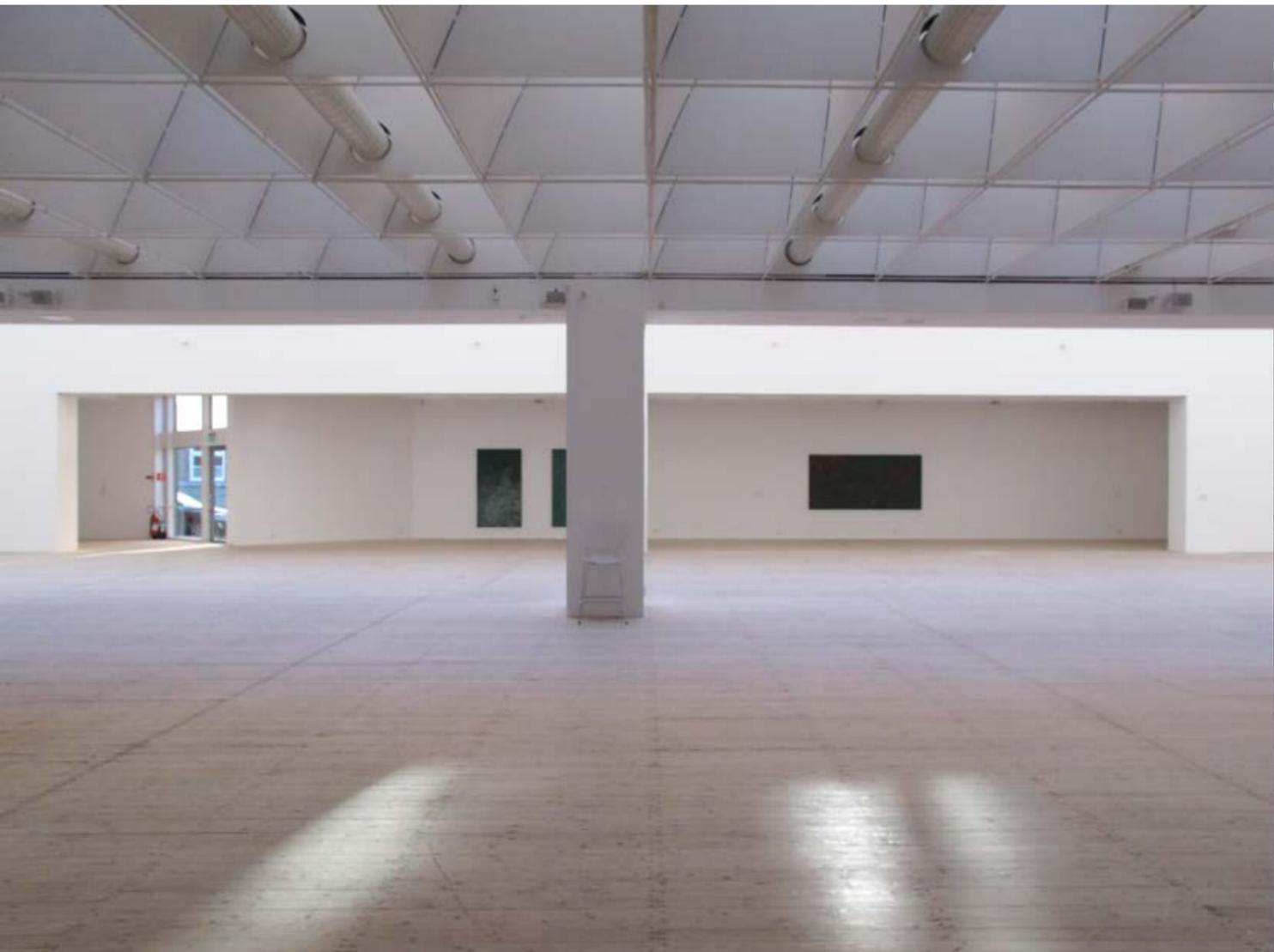
is hiding is as striking every time, the subtleness and the thinness of the borders between inside and outside in sharp contrast to the distinctness between them. [5]

I shouldn't be here but I am and so is the light; here as if no one ever needed it elsewhere it is filling the void between the white walls and this exact moment. Nothing here is due today, nothing that cannot

wait. Outside the wind is passing by and I can tell you had forgotten how I felt, but just remembered.

The room is square, simple, and uninterrupted by the city life surrounding it. A rational concrete rectangle, a practical timber floor, and to my left a fully glazed facade pointing towards a park beyond it. Above it all, a remarkable roof that is the result of the practical knowledge of an unusually productive





career. A remarkable roof consisting almost solely of lanterns, roughly 550 lanterns in neat rows surrounding one, giant roof light facing north and the adjacent cityscape. [6]

The light is here as the world is not, and we can't be bothered with the outside for a while. In here the possibilities are endless, each surface dented, real, understated and bleached. The milky meekness of

the city oozing in from large slanted sheets of glass, slowing us down, calming our pace. We walk the edges of the room as sitting down somehow seems harder still.

There are 550 lanterns covering this floor, and we are standing under two, looking up. 550 times slanted northern light led down through the white, angled cupolas of the honey-comb roof. Diffused

and amplified through the orientation and materials of the lanterns, the light is strict, true, translucent, mute. [7] It is the result of hard work, well executed; it is calculated, tested, sound. The fir floor is hard enough for heavy loads, soft enough for human legs. It warps but it cannot be avoided, it gets washed twice a year. [8][9] Parts of it can be lifted out to enable installations of great proportions, and the white walls added to or partly removed. They have

dents and dots and holes from nails of exhibitions past, layers and layers of paint, one on top of the other, like the slow growth of moss or lichen. I like them; they fasten the passing of time to the building, pinning it to their uneven surface.

There are 550 lanterns covering this floor, and we are standing under two, a meter apart, looking at each other. There's nothing tip-toed in this conver-



sation anymore and I can tell you'd like to leave but can't make yourself retreat. It took us hours and distances to get this far in, something tells me for the last time. It took us ages to push through barriers of passed time and dropped words and late night screen-lit dots that come and go. It took us so many years apart and here we are, united in the notion that nothing could be different regardless if we wanted it to be, regardless if we'd tried.

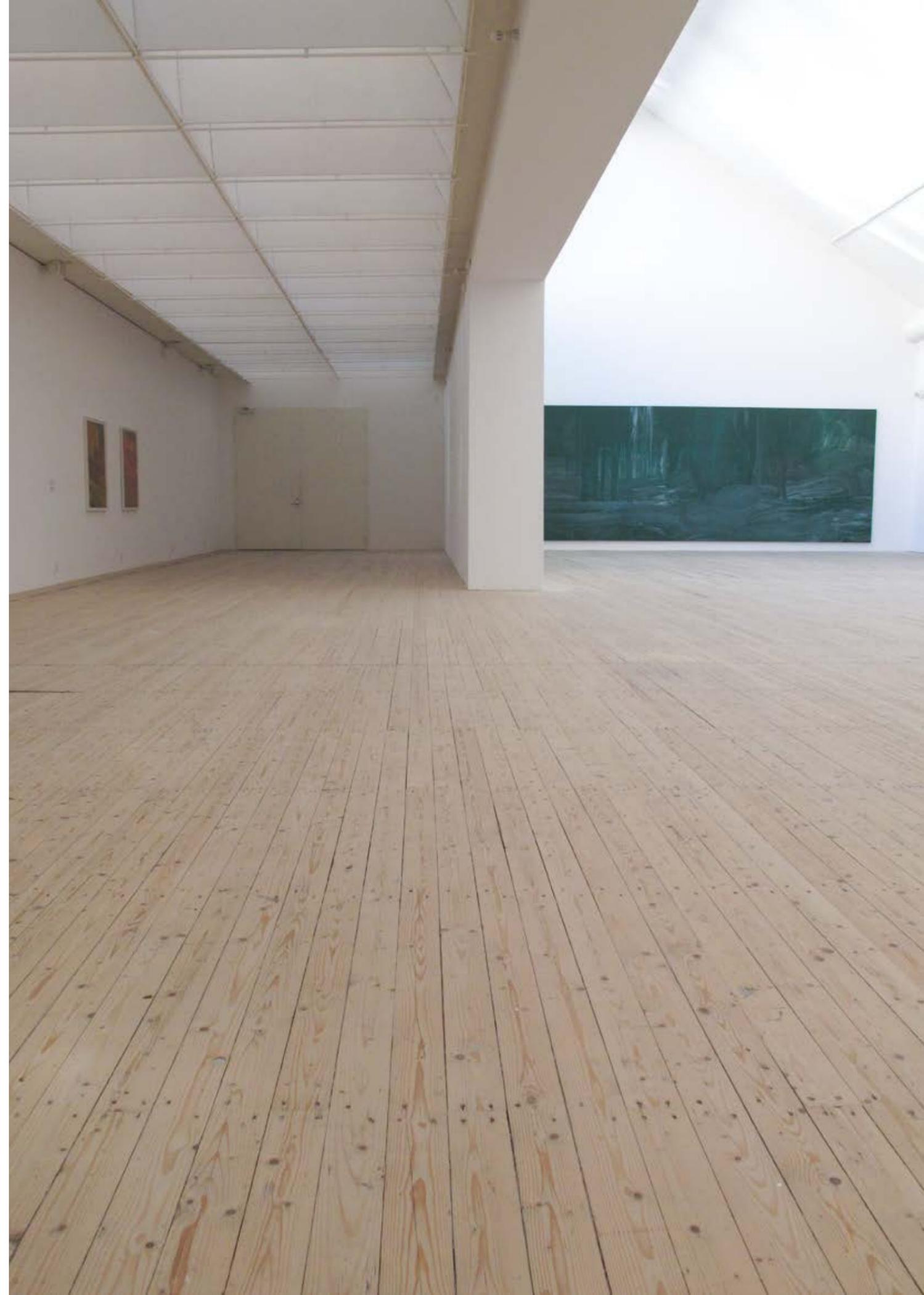
The fir floor as soft as your face is sharp, all those lines, new to me, clearly lit. You look at me as if a promise has been broken, but of what I cannot say, and I can't help but think why it is that everything softens with time, except for some human beings. Wood, stone, concrete, light - but not some human beings. I shouldn't be here but I am.

There are 555 lanterns in this room, I know because I counted.

Outside the world is spinning around a city by the sea, a city never known and never bothered. A city of parks and rain and indifference, of head-winds and bicycle lanes in a fruitful, hateful symbiosis.

And in the middle of it all, a pragmatic box that thinks it is a shed, is so much more than that. Made to stand the fury of art and hold the forces of imagination, it is really a sundial, a temple of light. Its simplicity in form spurring richness in possibilities, its unpretentiousness vacant for the volatile ideas it houses.

Built by a man who didn't care much for words, but knew that all that is needed for some things to take place *is place*; void, sturdy materials and the passing of time. The dramatic unfolding of the unfolding dramas of man, as we are all here together, beneath the sky above.





THE NORDIC PAVILION (1962)
Sverre Fehn and the Nordic Roof in Venice

There will never be a more beautiful roof than the roof of the Nordic Pavilion in Venice. Or perhaps more truthfully, as I am doubtlessly biased in the matter; there will never be a more Nordic roof than the overlapping concrete lamellae of Sverre Fehn's 1962 exhibition pavilion. Nordic in a sense of an architectural tradition of a certain kind of pragmatic minimalism, that in its aim to emphasise the beauty of the specific conditions of the site and incorporate it in the program, has always bordered on the poetic. It is Nordic in the simple, apparent use of materials. Nordic in the sober solutions to the aspects of the program. But also Nordic in the sense

that it transforms the intense Italian light into a homogenous, calm Nordic ambiance. Between the concrete roof grid and the concrete tile floor there is nothing but the steady, overcast light of the Nordic sky, only interrupted by the three plane trees left untouched by the architecture, black against the milky light.

It is Nordic, not in the sense of traditional building materials, but rather in the way it uses modern building elements to create a strong presence of place. The heavy timber roof beams of traditional Norwegian architecture have been replaced with thin concrete slabs, a meter high





and only 6 cm thick - spanning the entire pavilion with a distance of 52,3 cm between each slab. Resting on top of these in a 90 degree angle are then another set of identical roof elements, together creating a roof consisting entirely of light shafts, roughly 50 x 50 cm in size and with a depth of two meters. On top of these light shafts lay a curved, translucent plastic cover, a shield for rain and a first filter for the light. [10]

To further enhance the transformation of the light, Fehn mixed the white concrete with white sand

and crushed local white marble, making each slab seemingly translucent in itself. In this way he created a roof that, when struck by light absorbs it, encapsulating it in the very material of the beams and filtering it down through the hollow shafts of the roof. This makes the pigmented beams glow as if in themselves light sources. It is also the secret behind the magical Nordic light, inside one of the many pavilions of the Biennale of Venice. [11]

Three were chosen for the competition, and it is worth noting that the lanterns of Malmö Konsthall

were at this point in time suggested for a pavilion in Venice. Two proposals were highlighted by the jury, but one was deemed unsuitable for the specific Venetian climate. Klas Anshelm, upon losing to Sverre Fehn, put the lanterns away in a drawer for a decade, only to redevelop them for the Malmö Konsthall. A project is always constricted to a certain place and a certain period of time in an architect's life. An idea, however, can emerge early and take physical form late in a career, develop over a lifetime before it finds its proper place and program. The 1975 Swedish exhibition hall bears

in some manners direct likeness to both the built pavilion and the rejected proposal. [12]

On a site that is one of the few parks in Venice and is simultaneously the site of 30 other architectural pavilions and their various modus operandi, Fehn's hovering roof stands out as a small universe of its own. The building consists of a simple rectangle, two adjacent walls completely closed and two completely glazed. Being very much a part of the surrounding park and its Venetian, damp soil, it is the ambience of the room and the qualities of light that



create the feeling of secluded, intimate space.

To be able to keep the existing trees on the site, the roof was constructed as a large pergola, allowing them to continue growing right through it. Holding it all up are primary concrete beams of larger proportions, enclosing the perimeters of the roof. At the side of the entrance, the beam splits in two in a y-shape, to avoid colliding with a large plane tree. In the original proposal, the beam had a different placement, missing the tree altogether. Fehn consequently moved the beam when construction began to ensure a collision, and an interaction between building and site, dwelling and earth. [13]

We arrive mid morning, just after they open the

gates, on a cold, damp October day. There is already a crowd around each of the pavilions, and our visit is lengthy but constantly disturbed. The room is made for this purpose, yet the amount of visitors leave us feeling cheated of the spirit of the space. The open layout makes it even more obvious that we are anything but alone.

There is something about the Nordic light that suggests spaciousness. The Venetian context is crowded, narrow-alleyed, golden, a winding shortage of land. There is a constant presence of materiality and bodies: human, stone, water. Of brick bridges and flooded streets, everything stealing space from something else in an ever-present dance of tourists and tides. This is a part of the Venetian context, history - of its



spirit and soul. You don't come to Venice to be alone, you come to Venice to negotiate: with art, with history and with time, over the stepping stones at hand. To slowly make your way through, above, beneath layers and layers of additions and adaptations and additions again through centuries of collected wealth and artistic efforts. You come to Venice to experience the magic of the city on the sea.

But inside the Nordic Pavilion the sensation is different. The steady, shadowless ambiance almost demands a certain solitude, as if the light had a physical presence of its own. Here the Venetian negotiation of space leaves the light with the lower hand, deprives it of its essence. A pavilion whose main attraction is a unique quality of light stands overcrowding badly.

As the concrete walls become one with the roof and the floor, the only vertical elements are the almost black trunks of the plane trees. Here the roof gives way for nature, connecting the earth beneath our feet with the sky above. *Upon the earth and under the sky we humans dwell*, as the autumn rains run down the trunks to the earth below, the building becomes a modest frame around life, around the human condition to dwell upon the earth and under

the sky. An assemblage of parts - floor, wall, roof - that in conjunction creates space and conditions for extraordinary light. [14]

In his much acclaimed collection of architectural essays named *'Encounters'*, Juhani Pallasmaa refers to Fehn as someone who *'explores the mythical and poetic ground of construction'* [15], a very insightful remark on a unique and reflective, although not that extensive, body of architectural work. The buildings of Sverre Fehn are not easy to fully grasp, neither their intentions nor their soul. It is an intuitive presence of place rather than a logical set of rules that makes the Venice pavilion remarkable. A set of clear elements - in themselves just parts - form a whole that is both connected to its surroundings, and completely apart.

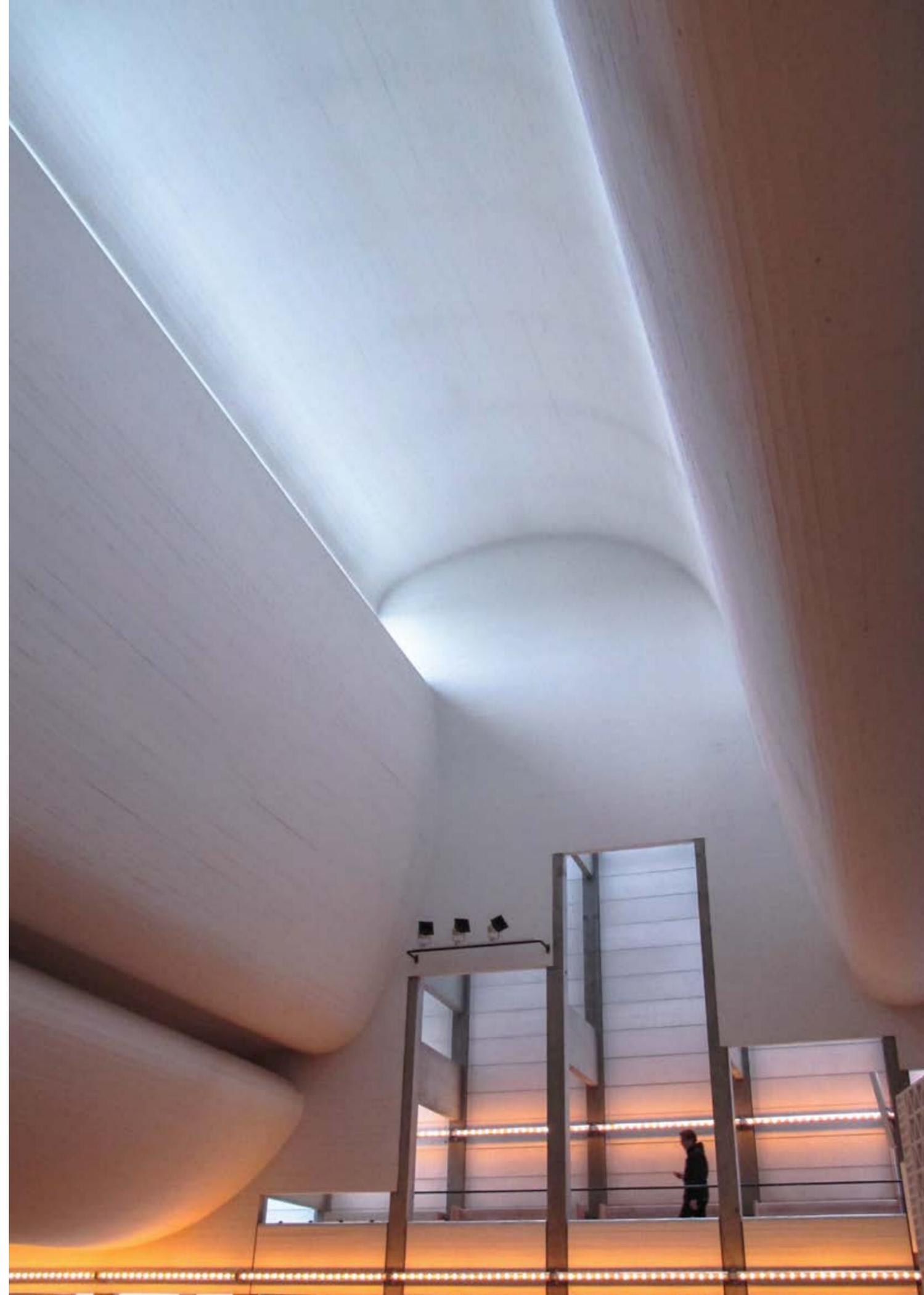
Under the Nordic roof in the Giardini park, a special light is present. A light essentially regional, created with regional materials, and at the same time reminiscent of another place, another region, another locality. Using local materials in such a skilful way as to create a mood, an ambience that instantly places you in a different habitat, roughly 3000 km to the north. That is the power of architecture, and the transformative magic of light.

BAGSVAERD CHURCH (1976)

Jorn Utzon and the Infinite Box

It took Jorn Utzon almost ten years to complete what was to be his regional masterpiece: The Bagsvaerd church outside of Copenhagen. The Sydney Opera House had brought him fame and reputation, but it was the project that came after it that would establish him as a true master in the chronicles of architecture. It is noteworthy to point out that, while the Opera House proved him to be a conquerer of strong shapes, he never again relied on extraordinary form to bring value to a project. On the contrary, his later projects are masterpieces of the common place - in the most beautiful sense of

the word. They are sensitive, humble spaces, where materiality and craftsmanship are the strongest traits. In the few places where unusual forms occur, they all derive from a wish to transform or guide daylight. Inspired by natural conditions and with a true understanding of the qualities of the different sites he worked on, Utzon's designs are habitable vessels of light, diverse and ever-changing.[15] In describing the project Utzon himself stated that *'it is the light that is the most important thing in this church'*, and that he had *'created a place that fades upward'*.[16]





The congregation of Bagsvaerd approached Utzon after an architectural exhibition in Gladsaxe, Denmark in 1967, where an unsuccessful competition proposal for a church was amongst the exhibited projects. He was asked to produce a proposal for them, and returned the following year with a scheme, including two sketches of the concept that have been largely spread. Later adding that he had the idea for the building on a beach in Hawaii, where the trade winds come rolling in all the way from California, the first sketch is of a large cloud over an ocean beach, and in between the two a gathering of people. In the second sketch, the clouds have become a vaulted ceiling, and the gathered people a large congregation approaching a cross.[17]

The finished church is a simple rectangular shape, from the outside more in the likeness of industrial building than religious sanctuary. It has been described as being truly a product of its place, and in many respects it is. Its construction is straight forward and in line with a Nordic tradition - with frames onto which prefabricated facade elements have been attached from the outside. Its disposition and the facade's changes in height have been linked back to older Danish religious architecture. [18] But uttermost it is the way it is undoubtedly interlinked with its surroundings through the presence of light, that makes it truly connected to its place. Inside, a neat system of hallways, courtyards and workspaces, each separated in feel by a careful treatment of

daylight, lead up to the grand finale: the church itself.

Entering, we find ourselves in a very different ambience than the world we just left. Inside a system of long hallways, double in height and lit entirely by daylight from the peaked glass roof, the brightness is remarkable, even on the greyest winter day. The pale, light whiteness of the painted concrete and the Swedish pine often make them brighter than the surrounding landscape, explained by Utzon in the simple way that bright surfaces reflect and enhance the light better than relatively dark houses, landscapes and plants. He states that: *'the light in the corridors provides almost the same feel*

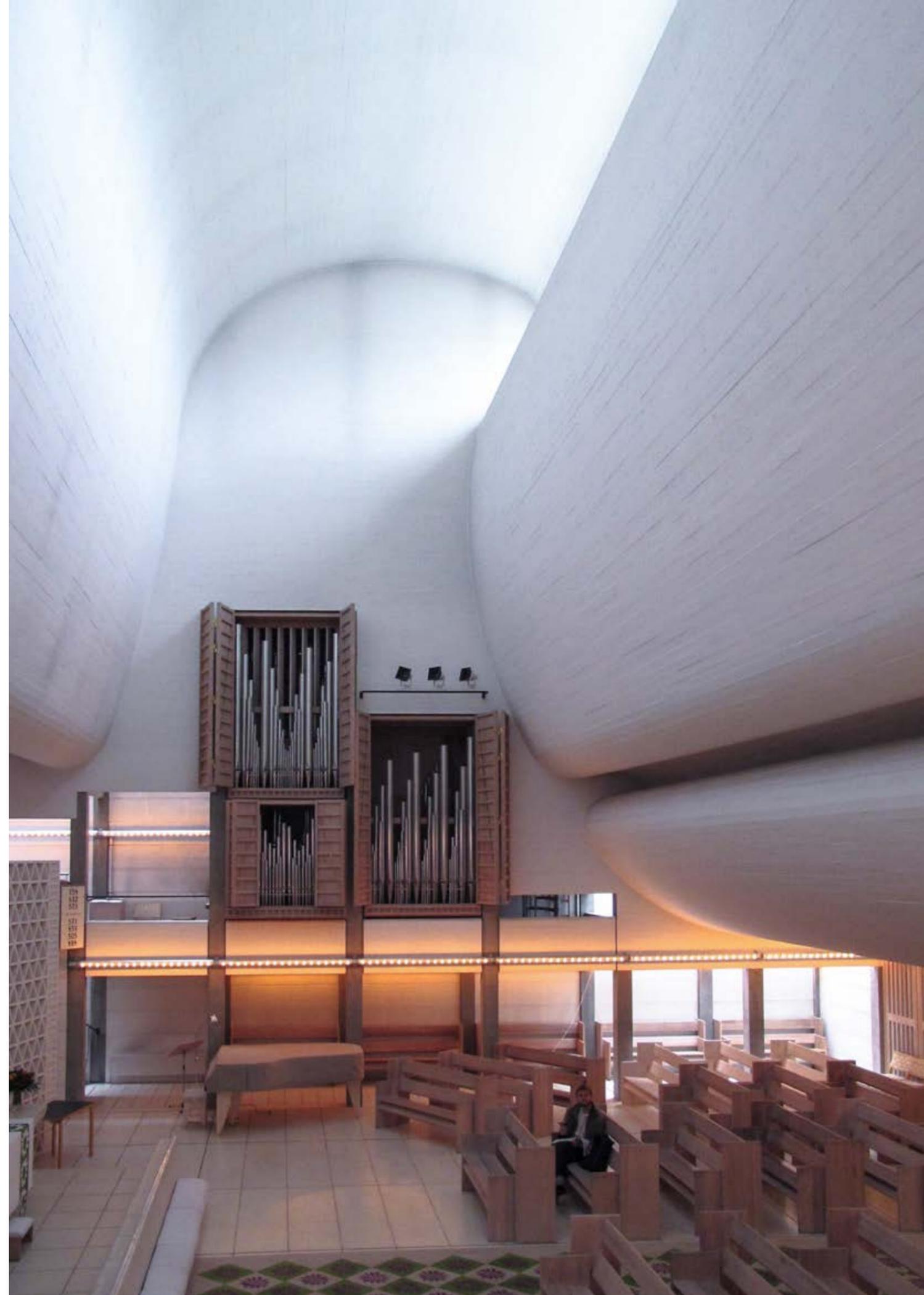
as the light experienced in the mountains during a sunny day in winter, making these elongated spaces happy places in which to walk.'[19]. He is very much right. In these narrow yet spacious hallways you are disconnected from the surrounding landscape - not a particular loss in February - but in every sense in contact with the state of the outdoors through the slight modifications and shifts in the qualities of light.

Also leading light into the interior are the six courtyards, onto which the working rooms are situated. Each courtyard having slightly different properties, the light is filtered and reflected off of foliage and through screens of wood and glass, ensuring that

the light is well suited for the daily work of the church's staff. The relatively small size of the courtyards and the double height of the corridors flanking them ensures there is barely no direct sunlight, filtering the light before it enters the rooms surrounding them. In this manner, the bright summer light is softened, but the scarce winter light collected and enhanced, distributing an even daylight all year round. [20]

The third strategy we find inside the church itself. Originally intended to cover more of the building, we here find a hovering, curving cloud of a ceiling, at its lowest above the seated congregation and reaching its highest point above the altar. Here, hidden behind the upward curve

of the concrete roof, are clerestory windows, facing west and spanning the entire length of the room. During morning sermons, the light enters evenly along the milky curvatures and diffuses down into the room in a beautiful, gradient manner. In combination with the flanking skylights of the side-aisles they make the room still, bright, yet dramatic. Light seems to emanate from the surrounding walls, and ooze down from high above the hovering cloud. In contrast to many buildings, The Bagsvaerd Church is at its most beautiful at overcast conditions, when the even Nordic light is carefully enhanced and softly directed into the unexpected interior of the building. The ethereal feeling of universal space inside the sanctuary





even implies, as Martin Schwartz suggests in his essay on The Bagsvaerd Church titled *Light Organising Architecture*, the reading of the church as the seventh courtyard of the building. It is then the largest of them all, and one that is always overcast. The roof consequently takes on the characteristics of a real cloud, reflecting and re-reflecting the light internally until it, in effect, shades itself. It also becomes a metaphor for the world outside, instantly turning the closed sanctuary to an infinite part of the surrounding cosmos. [21]

As inside becomes outside, for a brief moment we can almost grasp the ungraspable; the urobolic link between the atomic and the nebulous. Meanwhile the abstract sky sheltering the congregation is slowly changing in brightness, hue and feel during the days, months and years.

In many ways this is a secluded design for overcast conditions - a genius move in a tiny grey country by the northern hemisphere. But this is also a universal, inward turning design of the eternal. The masterly treatment of the Nordic

light is what creates the ethereal, infinite qualities of the seemingly modest spaces. By seclusion, by attention to physical conditions, and by a fantastic roof hovering weightlessly over the congregation, The Bagsvaerd Church is at the same time secluded and endless. An ethereal, bright, infinite space inside a very much defined white box somewhere in Danish suburbia.

Apparently Utzon was sensitive to glare [22], and considering he spent his career developing ways of controlling, directing and inviting daylight in to play - no matter in Denmark, Mallorca or Australia - this is likely to be true. But the light conditions he created are more than just a clever way of avoiding visual discomfort. They create moods, ambiances, and distinct, regional places that are the explanation to why architects world wide study his work for inspiration and guidance. This is the grandeur of Utzon's designs, and the beauty of the transforming qualities of daylight; creating spaces inhabited on equal terms by the trivial details of human life, and the grandeur of the eternal, moving light - coming back to visit every day.



References

- [1] Holst, Jonas, *Rethinking Dwelling and Building*, ZARCH No.2, 2014, 53-56
- [2] de Beistegui, Miguel, *Thinking with Heidegger: Displacements*, Bloomington: Indiana University Press, 2003, 156
- [3] Qvarnström, Per, *Malmö Konsthall 1975-2005*, Malmö: Malmö Konsthall catalogue No 201, 2005, 42
- [4] Ibid., 19
- [5] Caruso, Adam, *Malmö Konsthall*, London: AA Files Issue 41, 2000, 30-34
- [6] Qvarnström, 2005, 42
- [7] Ibid.
- [8] Ibid., 37
- [9] Caruso, Adam, 2000, 30-34
- [10] <http://www.archdaily.com/784536/ad-classics-nordic-pavilion-in-venice-sverre-fehn>, 2017-01-10
- [11] Ibid.
- [12] Qvarnström, 2005, 15
- [13] Wilhelmson, Anders, *Sverre Fehns arkitektur*, Stockholm: Arkitektur, 1994:6, 6
- [14] <http://architectuul.com/architecture/nordic-pavilion-at-the-venice-biennale>, 2017-01-10
- [15] Pallasmaa, Juhani, *Encounters - Architectural Essays*, Helsinki: Rakenustieto Oy, 2005, 195
- [16] Schwartz, Martin, *Light Organising Architecture - Jorn Utzon Logbook: v. 2*, Denmark: Edition Blondal, 2005, 161-165
- [17] Ibid., 161
- [18] Asgaard Andersen, Michael, *Revisiting Utzon's Bagsvaerd Church*, Nordisk Arkitekturforskning 2005:2, 95
- [19] Ibid., 97
- [20] Schwartz, 2005, 161-165
- [21] Ibid.
- [22] Ibid.



Leaves and tiles, Fondazione Querini Stampalia, Venice



Wooden facade, Rome

MATTER

The Light from Within

If the light from above instantly places us under the sky, then light that is reflected off of materials, their textures, hues and colours, finds us somehow linked to the earth below.

Peter Zumthor, in *The Light on Things*:

‘Thinking about daylight and artificial light I have to admit that daylight, the light on things, is so moving to me that it feels almost as a spiritual quality. When the sun comes up in the morning - which I always find so marvellous, absolutely fantastic the way it comes back every morning - and casts its light on things, it doesn’t feel as if it quite belongs in this world. I don’t understand light. It gives me the

feeling there’s something beyond me, something beyond all understanding.’ [1]

Could it be that the reason for our ancient interest in matter - its character and traits, its innate qualities and refining possibilities - is a direct result of our sense of relationship and belonging beneath the mystical light from above? Of everything dwelling upon this earth, the light from the sun is apart, made of something else completely - the only thing here that is not made up of matter, and the only substance here which is just merely visiting. Is *The Light on Things* simply our way of understanding and relating to the world around us? Materiality as the deriving force of specific light

conditions and environments is a subtle but ancient art, closely related to the ambience and symbolism of a space. Likewise preferred materiality and colours are equally often a result of the specific light conditions and environments of regions and cultures, in a never ending circle of conditions, traditions and evolution.

‘What I want to say is that the sense of space is not communicated by a pictorial order but always by physical phenomena, that is by matter, by the sense of mass, by the weight of the wall. That is why I assert that it is the apertures, openings and orifices that create spatial relationships. Modern architecture, abstractly stereometric, destroys all sensitivity

to framework and de-composition... we have created a void around things... to achieve anything we have to invent relationships. But someone might tell me: “See? Decoration doesn’t matter after all!” And yet I say there comes a moment when you have to decide the colouring of things...’

Carlo Scarpa, *Furnishings* [2]

As we are all instinctually aware, polished and glossy materials reflect the light in a mirroring, glaring way, as opposed to matte surfaces that diffuse the reflected light evenly in every direction. Likewise a colourful surface will reflect a certain amount of light depending on the darkness of the colour - white for instance 82 % of the incoming

light, yellow 78 % and dark blue or green only 7%. The reflected light will also inherit some of the hue of the matter on which it has bounced. The golden light of Grundtvig's Church in Copenhagen, the milky, floating light of the Venetian lagoon, or the heavy materiality of the pick-hammered concrete of The Barbican Estate are all results of this. More than an instinctive knowledge, these are powerful tools in the design of a setting, using matter to direct the quality and quantity of light. [3]

In his insightful book on the interaction between architecture and user *The Experience of Architecture*, Henry Plummer investigates our relationship with the built world around us, and the different levels on which it can encourage us to explore it. In two small, succeeding chapters, titled *Intricacy and Patina* and *Tiny Immensity*, he explores the intricacy and endlessness of the world of materials possessing multiple sensory scales. By means of depth of surface, patina, weathering and/or other interaction with the world around us - rusting metal, peeling paint or eroded wood - materials are brought to life, and seemingly dead matter evolving and changing before our very eyes. The ever changing characteristics of these materials are then inviting us to look closer, deeper, come back to examine their mystery time and again.[4]

But also on a larger scale Plummer argues that architecture should invite us in to explore, involve us, and engage us in a game of hide and seek on multiple simultaneous scales.

'Our ability to uncover new aspects of the world by the force of our own voluntary acts vanishes in a building



Pick-hammered concrete at The Barbican Estate, London



Tulle at the Danish Royal Ballet



Reflections and light at La Fondazione Querini Stampalia, Venice

whose features are either so scant or so unchanging that therein no incentive to draw us near. The sterile volume declares at the outset it is not worth exploring, whereas eye-catching features that fail to mutate with differing viewpoints assure us more slowly, but no less completely, that we are mere spectators to a preordained display. [...] In sharp contrast to these deadening structures are buildings whose parts are related to the whole and display pattern inside pattern, allowing them to alter and reveal new depths.[...] Every part of the building keeps opening up to the searching eye with features

that are at once huge and minute, galactic and nuclear.' [5]

In this way the architectural parts, the different materials, surfaces and spatial relationships become playgrounds of exploration, pieces of a larger puzzle, parts of a larger whole whose innate meaning we never really fully seem to grasp. We become involved in the built world around us, and its innate, ever-changing state of flux. To this I would like to add another variable - that of the changes in light. More specifically, the use of materials, tex-

tures, structures and colors that come to life under the present conditions, encouraging us to notice, take in, and pay attention to the difference in light throughout the days and seasons. The distinct and unique light of a specific place explored, inhabited and made an intricate and dynamic part of the design and atmosphere of a built environment - highly involved in the sense of place innate in every good work of architecture.

From the large volumes and powerful textures of Chamberlin, Powell and Bon's The Barbican Es-

tate, to the ethereal, golden light of Jensen-Klint's monochrome Copenhagen Church and Carlo Scarpa's scenographic additions to the Venetian city fabric, this chapter explores the magical combination of matter and light.

'To go about lighting materials and surfaces systematically and to look at the way they reflect the light. In other words, to choose the materials in the knowledge of the way they reflect and to fit everything together on the basis of that knowledge.'

Peter Zumthor, *The Light on Things* [6]



FONDAZIONE QUERINI STAMPALIA (1959)
Carlo Scarpa and the Power of the Joint

'The ancient built Valdrada on the shores of a lake, with houses all verandas one above the other, and high streets whose railed parapets look out over the water. Thus the traveler, arriving, sees two cities: one erect above the lake, and the other reflected, upside down.'^[7]

One cannot speak of Carlo Scarpa without speaking of Venice, nor can one speak of his life's work

without referring to the history of the city on water, the city consisting of many cities. The complexity of Venice has been beautifully captured by the Italian writer and journalist Italo Calvino in his classic book *Invisible Cities* from 1972. In it, the Venetian Marco Polo is the guest of Kublai Khan, pleasing him with fantastic stories of the cities he has seen, all - we are to learn - about Venice. Loosely based on the life of the merchant traveller, it is a magnif-

icent metaphor for the multitude of influences and identities, voluntarily gravitating towards the free spirited state or brought back by the naval military force, incorporated in the city fabric.

Venice, being a merchant hub for almost a thousand years, the veritable link between east and west, can at first glance resemble a patchwork - of ideas, cultures and details. But its distinct sense of place de-

rives from a constant adaptation, adding new to the old, stone after stone, matter to matter. The result is a city unlike any other. The Venetian Republic lasted a remarkable 716 years from 1081 to 1797, ensuring the sovereign states's unique place in history. Its trading and its manufacturing making it powerful, both economically, culturally and politically, Venice was a unique force in an otherwise unsteady world, linking the Catholic and Protestant



countries of the west to the Islamic, Greek Orthodox and Chinese cultures of the east.[8] Even the city as a built entity is a city of many different smaller parts and islands, joined together in beautiful ways, and added to for centuries.

Perhaps the fascination for the city can be explained by the complexity of its character. In his 1996 essay *City Sense*, Juhani Pallasmaa states that *'Undoubtedly the most significant and complex of human artefacts [...] the city contains more than can be described. A maze of clarity and opacity, the city exhausts the capacity of human description and imag-*

ination; disorder plays against order, accidental against the regular, and surprise against the anticipated. [...] We need secrecy and shadow as urgently as we desire to see and to know; the visible and the invisible, the known and what is beyond knowledge, have to obtain a balance.' [9] In Venice, routes are winding, alleys secretive, and the facades of the palazzos tight-lipped, unwilling to surrender the secrets we know they hold.

Furthermore it should be stated that the Venetian light, as anyone who's ever set foot in the city will tell you, is not like the light anywhere else in the

world. It is chalky, white, soft and floating; on a foggy day it does not fall, it lingers weightlessly in the air. It is bright, yet diluted, seemingly coming from inside the city itself - plastered walls and heavy stone bridges seem to radiate over milky, lucid water. From afar, the city seems to be floating in light, suspended between sky and water. Reflections from the ever-present water between houses and streets mean that in Venice, light equally often comes from below. This double nature of light means that any change - in time, season or weather - is doubled in effect. Each year in November, currents and tides bring the high water season, entering both build-

ings and squares. At this moment, the city on the water is in its purest form, rising up from a mirrored image of itself. As land and water becomes one, the direction of light is of little help to us when we navigate this distant world.

But the density of the city plan, the narrowness of the alleys and canals in combination with the height of the buildings mean that the city is simultaneously dark, living in the shadow of itself. Just a few meters in from the waterfront there is no sidelight to speak of, no room for light to spread. In a city on poles, land is



always scarce, and life a constant negotiation with the past, the present and the future ahead, over the space and light at hand.

This is the birth land of Carlo Scarpa, this was his past and his present, and with almost entirely all of his works being situated in and around Venice his architecture constituted a continuous dialogue between the existing and that to come, a sequel to the work of generations past.

Being intuitively interested in construction techniques, local craftsmanship and the different pos-

sibilities and limitations of the materials at use, by the end of his career he had built up an incredible knowledge of the potential of production - a catalogue of Scarpian matter - and the ways they can be made to shine.

The Fondazione Querini Stampalia is an excellent example of his incredible sense of material and detailing, forging another layer to the historical palazzo in the city centre. Having been in the ownership of The Querini Stampalia family for over six generations, the fondazione was created upon the death of the last living member in 1869. Formed

to foster the study of the arts and the artistic culture of Venice, the palazzo now houses a public library on its first floor - specifically open at hours and days when other libraries in the city are closed. The second floor is dedicated to displaying the art and furniture of a typical noble Venetian family in their original setting.^[10] However, it is the ground floor that we are mainly interested in.

We reach it by a slender bridge of wood, steel and stone, one of few new bridges in Venice, linking the small facing square to a former palazzo window just to the right of the two gated gondola entrances. With

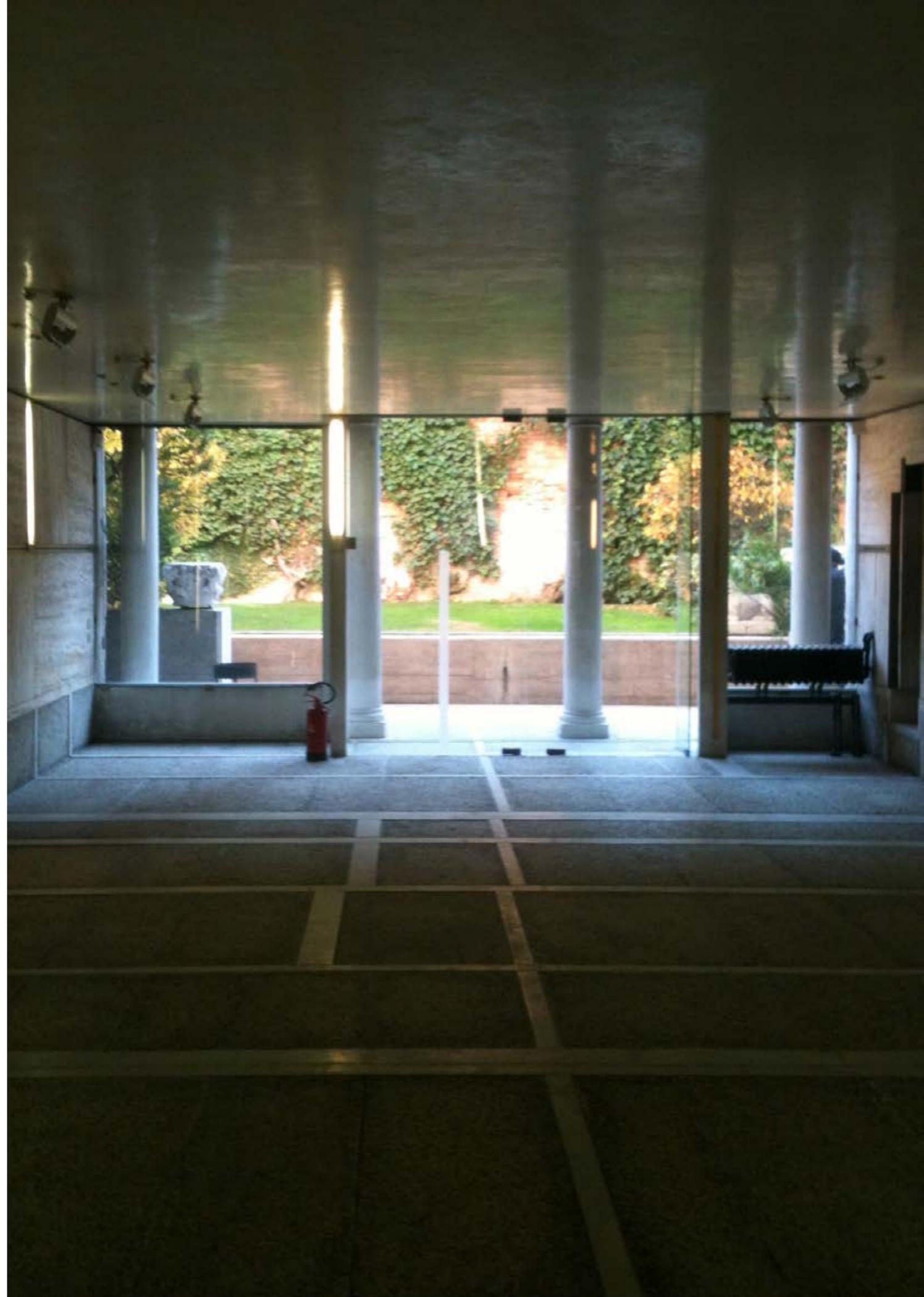
the old Venetian bridge right next to it highlighting its otherness in the historic centre, we cross it, and pass through the door/window-entrance, finding ourselves in the Fondazione's entrance hall. Here we are met by a vibrant mosaic floor of square and L-shaped marble, a seemingly irregular pattern of orange, white, green and red. The polished, reflective surface together with the liveliness of the pattern resembles the dynamic surface of the adjacent canal and the dark red polished plaster of the ceiling joins in; it's deep, shiny surface reflecting the light from the water just outside. In a Scarpa-esque way, it makes perfect sense - drawing the Venetian conditions of light into

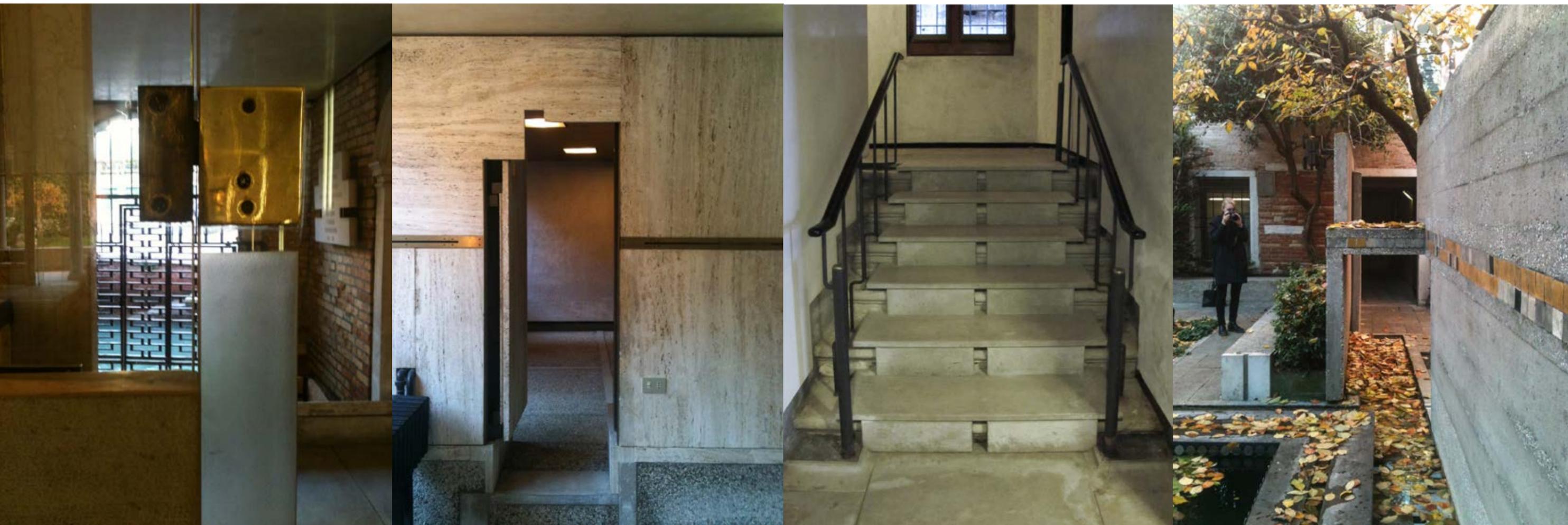
the interior of the public space.

Through an arched stone doorway in a reddish brick wall, next we reach a hallway of sorts, with the watergate entrances to our left, and the long, narrow exhibition room leading to an inner courtyard to our right. Through the glass doors, closing off the exhibition space at each end - thus allowing this public space to be heated - the light from the courtyard is intriguing, but first we must examine the space we are currently in. The ceiling here is a light, polished plaster, mirroring the light from the arched forms of the watergates. To our left, the canal is visible through the grids of the metal gates, as we are finding ourselves on an elevated platform of Istrian stone, mainly functioning as a stepped barrier between the inner rooms and the water of the canal, to which the room is open. The water levels low at the time of our visit, dry stone treads are leading down to its bright, milky surface. The turquoise, so specific for the water of the lagoon, is contrasting beautifully with the reddish bricks and the pale beige Istrian stone, descending into the canal. Between the polished ceiling, the backlight from the gates enforcing the drama of their dark graphic grids, and the whiteness of the polished stones reflecting the light much like the water beneath, this place is simultaneously bright and dark.

Along the outlines of the rooms, concrete trenches are whispering of the genius design solution to the problem with flooding: connected to the canals by pipes through the exterior walls, these miniature canals let the water run deep inside the gallery during the high water season in November. Instead of shielding the ground floor from the flooding, the water is invited, controlled, used to enhance the rooms connection to the surrounding streetscape, to which the architect was convinced the public art gallery belongs.[11] During *aqua alta*, with the light playing from the water filled trenches, the sensation must be astonishing; the interior walls becoming exterior - part of the city - as they too rise up straight out of the water of the lagoon.

Giuseppe Mazzariol, the Fondazione's director at the time of the renovation and a friend of Scarpa, remembers: *'One morning in 61 at the Querini, when I was insisting that the high water remain outside the entrance of the palace where the library is housed, Scarpa, after a moment's pause, and looking me straight in the eyes, replied to my pressing request: 'the high water must be deep inside - inside, as in the rest of the city. It can only be dealt with by containing it, by governing it, by using it as a luminous reflective material: you will see the plays of light on the yellow and violet stucco of the ceilings. A miracle!'*[12]





Turning our backs to the dramatic light from the water gates, we are facing the long, tunnel-like room gradually lit by the bright full height opening to the courtyard ahead. Through the glass doors we descend the bridge-like stone barrier of a hallway, down into the main space of the Fondazione. The room is a double square of 6 x 12 meters, its white polished plaster ceiling a mirror for the daylight outside.[13] The precast concrete slabs of the floor, however, are rough and non-reflective, making the effect of the bands of polished Istrian stone strips interlacing them that much stronger - an irregular grid

of light on the otherwise dark floor. The walls lined with polished travertine slabs enforces the view, in hue somewhat brighter than both ceiling and floor, and with gleaming brass strips mirroring the effect of the Istrian floor pattern. This is the room described by Scarpa as a luminous canal, a continuing of the complex conditions of the cityscape brought deep into an old historic palazzo. With materials usually used for exterior courtyards in Venice, the main space is both secluded and public, a city room of well known Venetian orders, yet unlike any other in the city on water. [14]

Materials and their connection to the already existing play the most important part in this scenography of nuances. In his additions and renovations, Carlo Scarpa never implied an overall scheme, never forced his designs upon the standing walls of the ancient. Much like the city itself, he instead played the game of the fragment, the part - the addition as a new thing, a new layer and a freestanding piece in the puzzle that is Venice.

In doing so, one thing becomes painstakingly important for the coherence of the spaces: the joints.

By treating matter as something almost fluid, the reflecting stone walls and lacquered ceilings becomes a continuing of the luminous plaster walls and canals of Venice. The joints on the other hand are heavy, solid, freestanding and clearly demonstrated - ensuring the observer of the present's light but firm anchoring to the past. In the details of the joints, Scarpa's knowledge of craftsmanship shows its true colours.

The city had been a meticulous tutor, and Scarpa - an acute observer - knew everything about its light and shadow, brightness and gloom. Like no one else,



he was a master of combining conditions of light and matter, creating environments so subtle and ever-changing - in hue, ambience and luminosity - that time seems to be simultaneously standing still and passing us by. As the daylight slips over the smooth walls, so it seems time is slipping out of our hands, had it not been for the heavy, trustworthy joints of brass and steel, pinning it like insects to the present moment. Scarpa's design then becomes a grid of anchor points, of emphasised and fixed coordinates in the space-time continuum, in between which the

heaviness of matter is turned fluid by ethereal light. The result is an interpretation of the qualities of the light of Venice - a transformation of its eternal yet fleeting characteristic into three dimensional spaces. It is timeless, not because it is without a sense of time, but because it is made for it. The ageing of the materials, the play of light during the days, months, and seasons of Venice, the coming and going of the flood and the delicate forging to the underlying layers of the 16th century palazzo - this is where time comes to linger.

We are sitting in the garden of the Fondazione Querini Stampalia, on the stone plinth lining the small elevated field of grass, resting our legs. The Venetian sun is bright, but the main room is shaded; a narrow alley like the rest in this city of moving light and darkness, the smooth stone and gleaming brass just barely noticeable. From inside, the experience is the opposite - the bright light from the open space lead in deep within the room by the susceptible surfaces.

In many ways, Scarpa's architecture *is* Venice, an

aesthetic collage of matter capturing and reflecting the light of the lagoon. It is alternating between the glittering of water and glass, the soft gleam of plaster and stone, and the gloom of the alleys, the darkness of the canals at night. It is made for this light, and the unique conditions it's creating.

And so it is with the works of Carlo Scarpa, that they are a direct result of Venice and its history, the city suspended between water and sky, constantly living with its own reflection.

GRUNTVIG'S CHURCH (1913-40)

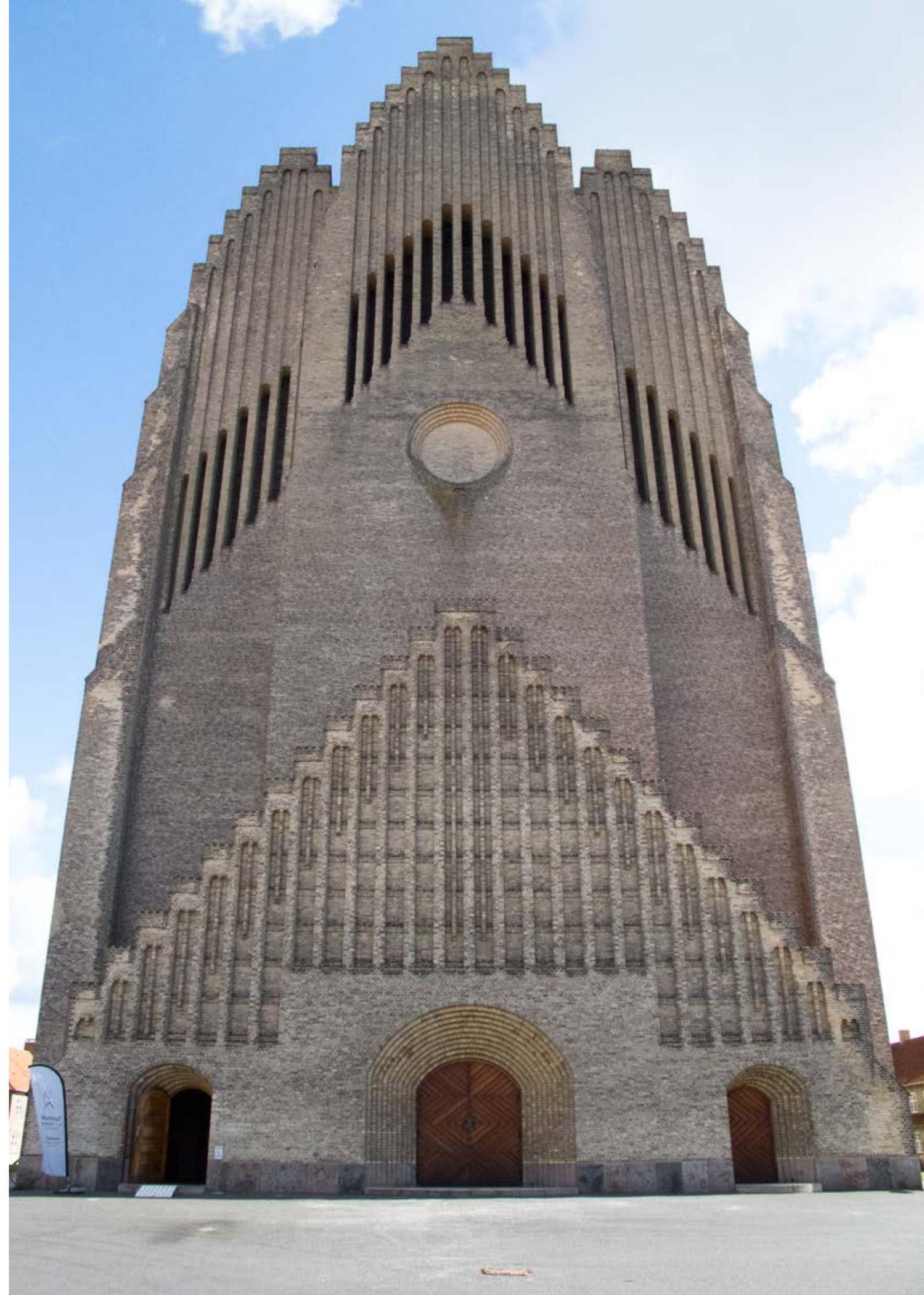
P.W. Jensen-Klint; Light as Only Ornament

In Grundtvig's Church, just on the outskirts of Copenhagen, light is the only ornament. Apart from the red roof tiles and the chalk baptismal font, this 1940's Church consists of two materials: handmade yellow bricks and light. No less than six million yellow bricks, and an ever-changing, everlasting light, falling in through narrow windows and spilling out on the floor. As the light, these bricks are local; made from Danish clay from the surrounding island of Zealand, [15] the church is truly a creation of its place.

The outside of the church has darkened with time, turning the facade the greyish yellow of straw, but on the inside the bricks are polished,

and their bright, pale colour preserved. Once it has entered the building, the light is convinced to stay, linger, settle down inside the seemingly translucent bricks. The way the light reflects and enhances the materiality of these man-made stones is spectacular, as if every single brick is quietly glowing from within. In here, the world is sometimes golden - at other times a pale, silent tint of yellow.

From sunsets in September to the late snowy dawns of winter, overcast afternoons in June and cold spring rains, the light in here is changing, moving, growing and shrinking with the days, months and seasons that come, then goes again. Coming and going, growing and shrink-



ing, the three dimensional space consisting of this natural light grows and shrink with it, like pulses in slow motion of a giant heart, like the movements of the universe set on repeat.

We visit on a sunny day in March. As the monochrome pillars reach for the sky, the high, narrow windows let the angled Nordic spring light in, leaving the arches above our heads in shadow. Reflected off of the polished bricks, the light is dominantly present. Present between our fingers and under the soaring vaults. Present around the corners and present below our feet. It is present in the aisles, between the rows of wooden chairs. In the tower with its bells, the narrow nave and rounded apse. It is present in the choirs and the transepts crossing paths. It sinks slowly through the air like translucent grains of dust. Defying any law of gravity that might be applicable to light, it is gradually fading upwards towards the ceiling vaults, high above our heads. The light is here, and so are we.

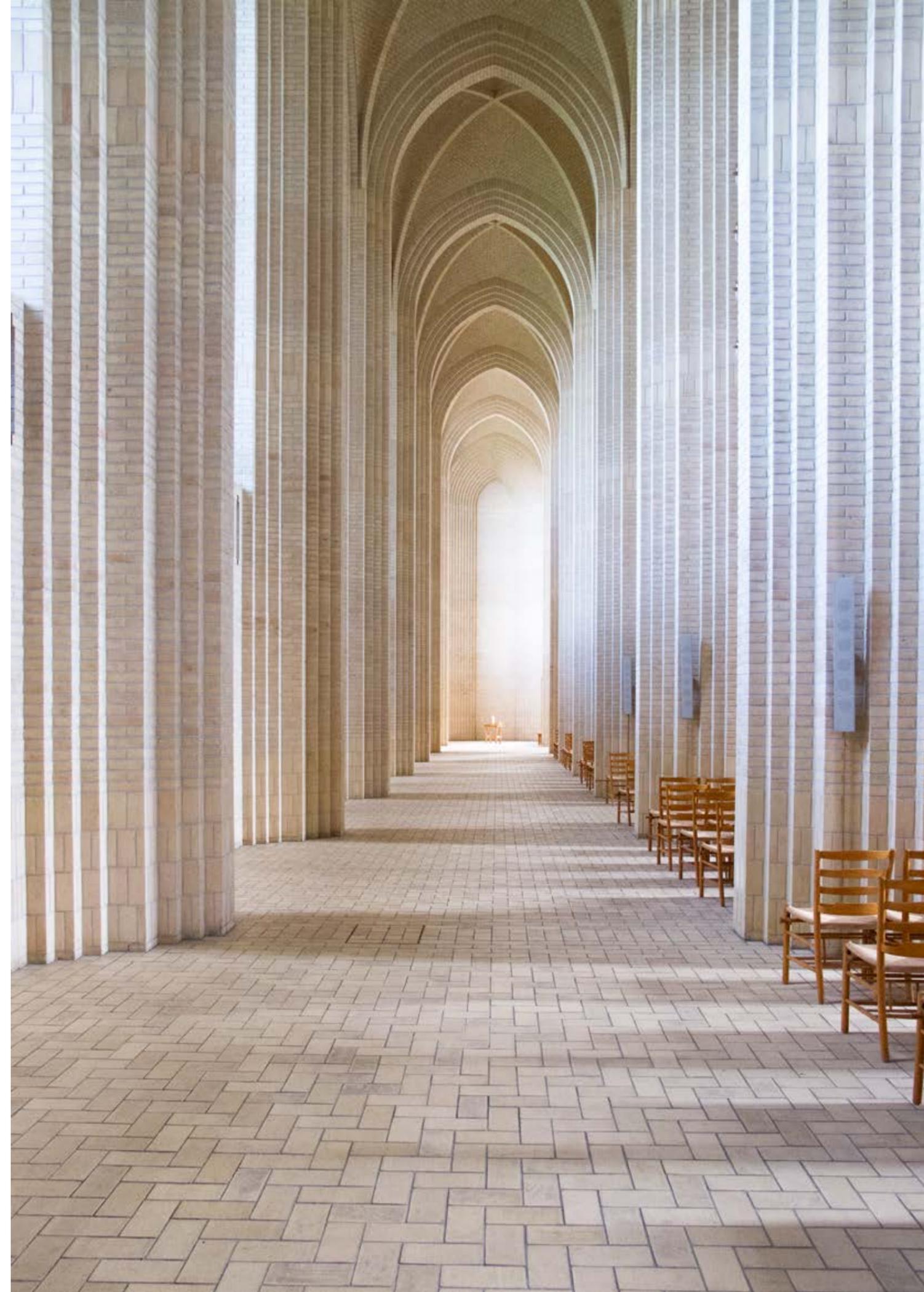
Built in memory of the priest, hymn writer, educator and politician Nikolaj Frederik Severin Grundtvig (1783-1872), the church is a grand

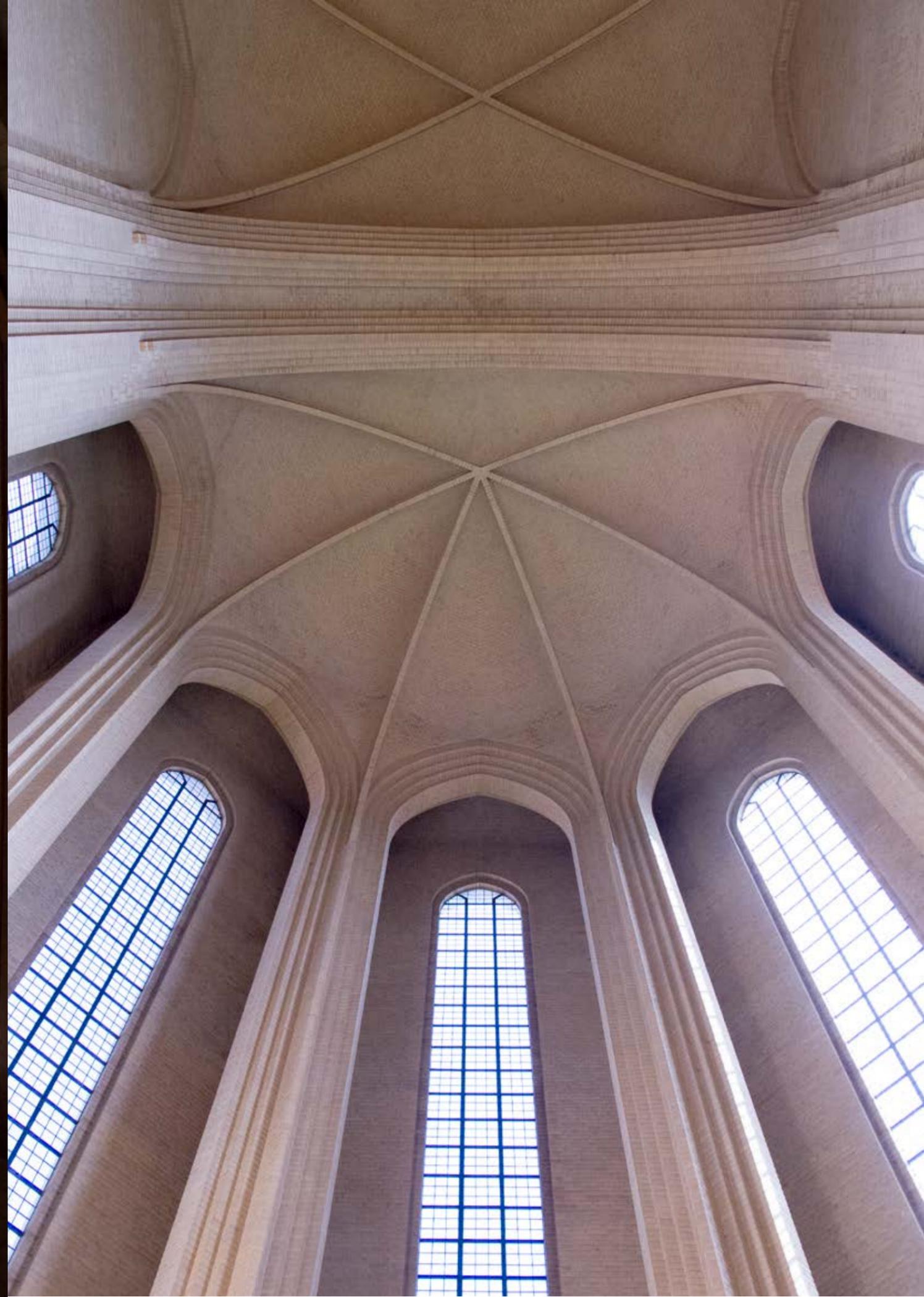
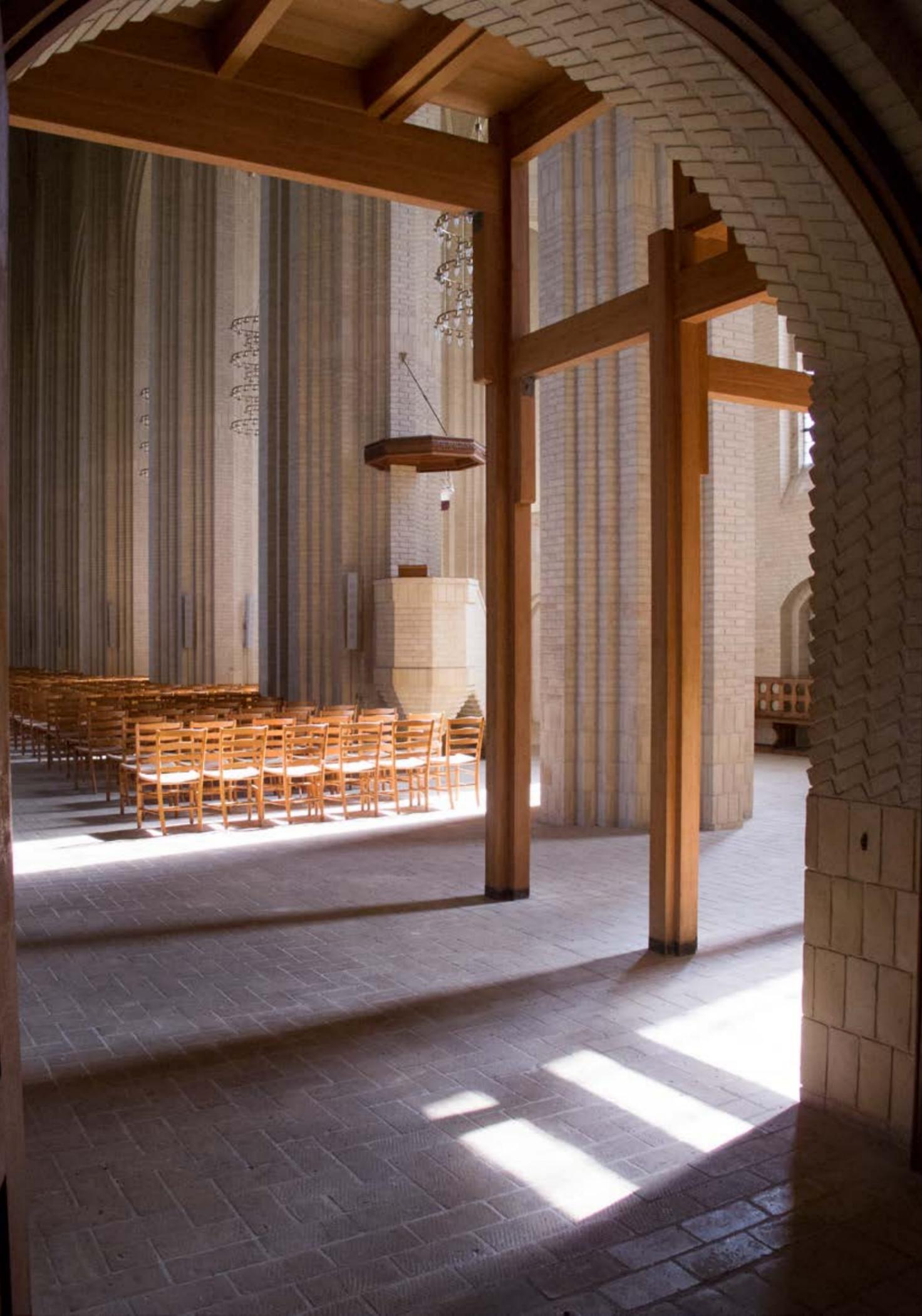
monument to the influences on Danish society of one man, whose humanist interpretation of Christianity inspired P.W. Jensen-Klint's majestic proposal. The humble spirit of the man is reflected in the simple materiality of the bricks, the importance of his life achievement in the grandiosity of the built space. The monochrome interior becomes a vessel, a playground for darkness and light, and is said to unite the heavenly and the worldly in the same elaborate way Grundtvig did in his hymns.[16]

Of this we know very little, as we are drawn forward through the nave, towards the brightness of the choir. Unaware of the life's work that is the root of all of this, we are simply enchanted with the light, the place, the silence of the space.

The church is a beacon, a lantern turned inside out - made to shine inwards, towards itself. At the same time it is a light-filled cave, isolated from the world around it.

This massive building, on the top of a hill on the outskirts of a city, is made of nothing but bricks and light. Stripped of everything but its







own materiality it is a hollow shell - and yet it is never empty.

As mid-day turns afternoon, the sun has made its way around the body of the church. As light fades, so do the bricks, their warm glow slowly dying. Above our heads the shadows are growing darker, gently creeping down the pillars, bringing the height of the room with them. We are sitting at the back of the darkening church, taking in the massive space. *'The search of lightness as a reaction to the weight of living'* [17], we are in no hurry to leave, nor eager to break the closeness of the quiet moment. While afternoon is slowly turning night we linger in the fading space, softly discussing the weight of these manmade stones deferring gravity, by the simple use of light.





THE BARBICAN ESTATE (1913-40)

*The City as a Wonder and Mystery - Pallasmaa,
the Barbican and the Explanation of the Sense of Place*

The world inside the Barbican is not the same as the world outside. Something here is different, heavy, haunting almost - a solidity and presence that is contradictory to the surrounding financial district of the City of London. As a place, it is majestic, intricate and mesmerising - much as the simultaneous heaviness and hollowness of rock caves carved by water and time. It is one of its kind in a number of ways, each linked to its unique place - in history and in the physical world.

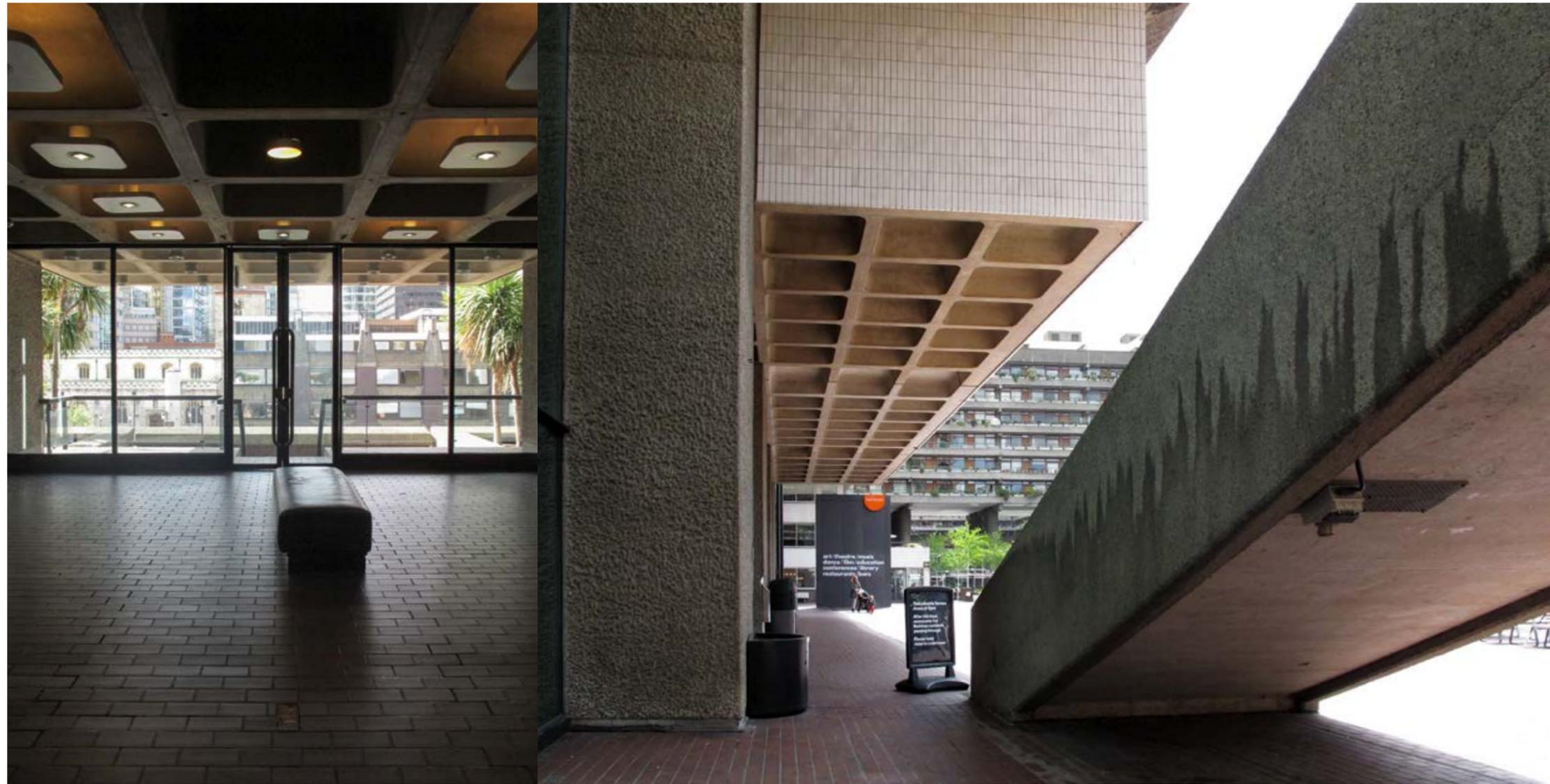
The huge estate consists of 2,113 flats with roughly 4,000 inhabitants, spread out over three soaring residential towers, thirteen terrace blocks, two rows of double height terrace houses and one row of townhouses. Furthermore it includes underground parking garages, raised pedestrian walkways, the St Giles Cripplegate Church, The London School for Girls, large terraced gardens, a great many stairways, and a lake with ducks. Lastly, when the development was already starting to take form, the

city decided to add the largest mixed culture centre in Europe, which to not disturb the rest of the program had to be placed mostly under ground. The Art Centre today hosts a public library, the Guildhall School of Music and Drama, the London Symphony Orchestra, a large theatre originally for the Royal Shakespeare company, concert halls, art galleries, cinemas, multiple restaurants and pubs, a sculpture court, a hostel and a conservatory. With most of the buildings and pedestrian walkways on pilotis as to

ensure the openness of the dense estate, it has been referred to as a montage of planes, a place of three dimensional interconnected spaces, heavily inhabited, yet soothingly spacious. The raised walkways, the somewhat hidden entrances and the closed outer buildings of the estate all add to the sensation that the Barbican is a fortress, as the most frequently occurring critique has stated that the hardest part of the whole experience is finding your way in. All together it makes up a 35 acre site on the north edge

of the City of London, a walled city within the city. [18]

Once inside, a clear sense of place is convincing you to stay - and many do. Frequent visitors of the arts centre finally moving into one of the flats, testifying their desire to stay forever - the histories are many and alike.[19] Why this is, one can only speculate. The calmness of the protected spaces, shielded from the business and traffic of the surrounding city. The complexity of the three-dimensional site, speaking to our desire for exploration. The multi-purpose program, ensuring a steady flow of different people and impressions. Solid, heavy materials, built to last and to age with dignity, giving the complex a common alphabet of textured surfaces, the sum of which constitutes the language of the design. And in the centre of it all, a conscious treatment of light and shadow that enlivens the heavy scheme. The play of bright surfaces and geometrical silhouettes brings the solid materials and textures to life, making them glimmer in the stark sunlight, gleam in the





darkness of the deep hollows. In his beautiful book *The Barbican - Architecture and Light*, architecture photographer Alan Ainsworth explores the graphic characteristics of the estate, pointing out that The Barbican would not be The Barbican without its brutalist materials, exquisite sense of detailing, and dramatic play of light and shadow.[20]

One can not discuss the materiality of The Barbican without using the word *pick-hammered*. To achieve the rough texture of the in situ concrete it was pick-hammered by hand, an astonishingly time-consuming accomplishment resulting in a beautifully irregular, stone-like texture. The play of light

enhanced by the materiality of the concrete walls, the shadows seem to stick to the roughness of the uneven walls like moss on ancient stones, slowing them down, and with them the passing of time itself. The complex seems carved out of the living rock - a monolithic giant. Contrasting the heavy materiality of the concrete is the use of smooth white tiles, dark steel handrails and warm hardwood window frames. The round lighting fixtures of clear glass is the opposite of the heavy walls onto which they are mounted, glowing globes reflecting the light. The conscious choices of the materials and their contrasting textures, highlighted by the natural light, makes the spaces dynamic - at the same time precious and

resistant.

The careful use of natural light continues into the private residences. In all the buildings, living spaces are arranged as to get the most out of the light given, with the social areas such as dining room and living room as well as bedrooms positioned by the external walls, and bathrooms and kitchens further in where light is scarcer. The conscious placement of the building volumes and the organisation of internal as well as external spaces makes the estate a bright, shielded oasis in the middle of the hectic city - a dramatic canvas inviting light and shadow in to play.

The Barbican reminds us of how different it all could have been’, Tom Dixon rightfully once stated.[21] Planned for a decade starting 1955, and then built between the years of 1965 and 1976, by the time it stood finished it had already become hopelessly outdated. By the start of the 1980’s, glass towers were dominating the London skyline, and the changes of our cities as we knew them were well on its way. The imagined future by the young architects behind the scheme was not the future that was to come.

In his 1996 essay *The City as Perceived, Remembered and Imagined*, Juhani Pallasmaa describes



the contemporary city as the city of the eye: *'Rapid mechanised movement detaches us from a bodily and intimate contact with the city. As the city of the gaze passivates the body and the other senses, the alienation of the body again reinforces visibility. The pacification of the body creates a condition that is similar to the dulled consciousness induced by television. [...] The visual city leaves us as outsiders, voyeuristic spectators, and momentary visitors, incapable of participation.'* [22]

Sleek, hard, closed surfaces of mirroring glass cut straight from the ground up, large commercial blocks made for money, not man, has turned our cities into neat grids in an elephants' graveyard, with nothing

but nothingness in between the structural skeletons of steel and glass. With this, the city as a wonder and a mystery, as something with a life and a storyline of its own, out of our control, has been lost to us. The flat, mirroring facades of today's buildings leave us with nothing but our own reflection. So much of the city today is off limits, as the spaces between buildings have become somebody else's property. Light and shadow, open spaces and closed walls, hidden walkways and deep passages, distinctive materiality and open air - the city of three-dimensional spaces invites us in to discover, explore and move through its multifaceted universe. It is a place of constant change because it is what we experience it to be. And at the same time it is an entity of its own, a liv-

ing thing, evolving and involving.

Juhani Pallasmaa again: *'The city contains more than can be described. A maze of clarity and opacity, the city exhausts the capacity of human description and imagination: disorder plays against order, accidental against regular, and surprise against the anticipated. [...] The haptic city welcomes us as citizens, fully authorised to participate in its daily life. The haptic city evokes our sense of empathy and engages our emotions.'* [23]

The architects of The Barbican knew this, and they knew it well. When Chamberlin, Powell and Bon was given the opportunity to create a proposition

for the site in the northeast corner of the area that constitutes the City of London, they had just finished another housing estate on an adjacent lot called The Golden Lane Estate. The fairly young architecture firm had won the council's trust, and during the coming decade developed no less than five different schemes for what was to become The Barbican Estate. The earlier drafts were clearly influenced by the movements of the time, but even as the scheme developed many of the overall ideas from the earlier years stayed. The closed housing estate - with its internal streets and diverse program providing the residents everything they need - have a clear connection to the Unité d'Habitation by Le Corbusier, finished in the previous years and



model for so many of the following projects around the world. [24]

Upon officially getting the building commission, the three architects set out on a grand tour of Europe, looking for inspiration. Well aware that they were designing a part of city rather than just separate buildings, their focus lay with cities and their organisation. For most part, the trio traveled around Italy, and later Powell referred to the canals, bridges and pavements of Venice as a large source of inspiration for the estate and its circulation. In many ways The Barbican and Venice are truly alike - a

maze of a city with its own rules and pathways, not always clear at first sight, but with an internal logic of its own. As is the case with any place of complexity and intricacy, what is obvious for its inhabitants is often perplexing for the first time guest.[25]

But more than that, there is a common language throughout the complex that is uniquely Barbican's. In here, the shadows are deep and the materials are solid, the details exquisite. From the overall scheme down to the bathroom sinks or the handrails of the stairs, it is a thing of its own. It has a presence and a sense of place, it *is something*, something which has

a language of its own, and as any good city, once visited it stays with you. It is not a place you would forget. It is not for the weak hearted, nor the insane; It is not for the ones easily lost. As a thing it is a complex, and as a complex it is huge - a three-dimensional city within the city of London.

More than just mere size, it is impressive in a sense that there will never be anything like it ever built again. Just as is the case with every noteworthy piece of architecture, the Barbican is the result of a combination of unlikely circumstances, most of which are extremely rare. A 35 acre bomb site in

the middle of financial London. A client that is the council of the City of London, eager to build high quality architecture for declining voters, preferably in the upper end of the income scale. A moment in time when the future looked bright and design was the solution to most problems caused by people living closely together. And three young architects with a vision for the future of the city of modern man, based equally on successful historical precedents and ideas of the new and exciting life ahead. [26]



References

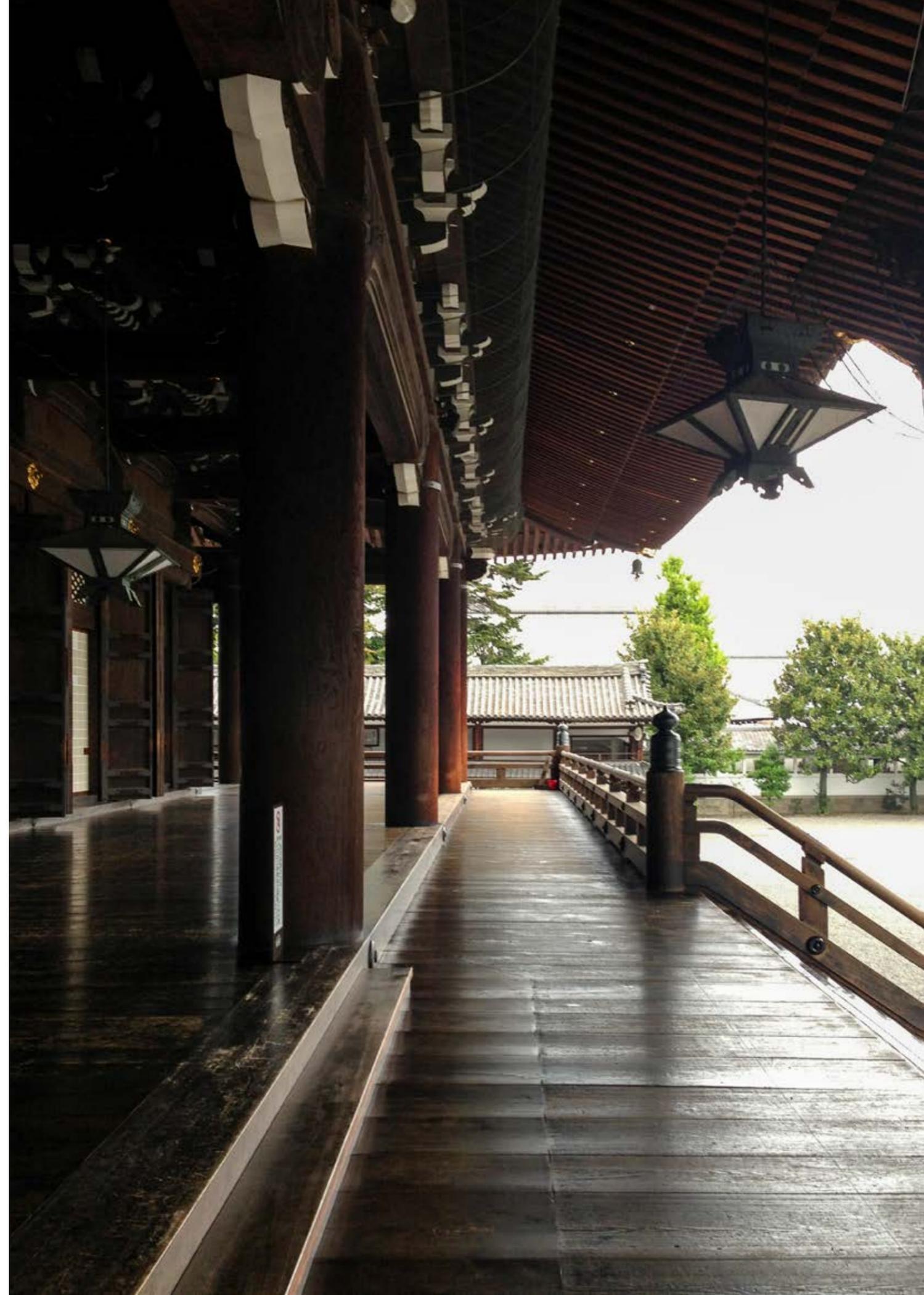
- [1] Zumthor, Peter, *Atmospheres*, Basel: Birkhäuser, 2006, 61
- [2] Dal Co, Francesco, and Mazzariol, Giuseppe, *Carlo Scarpa, The Complete Works*, Oxon: Electa/Architectural Press, 1986, 282
- [3] <http://iva.velux.com/competitions/international-velux-award/posts/light-and-materials>, 2017-03-12
- [4] Plummer, Henry, *The Experience of Architecture*, London: Thames and Hudson, 2016, 179-183
- [5] *Ibid.*, 183
- [6] Zumthor, 2006, 61
- [7] Calvino, Italo, *Invisible Cities*, London: Secker & Warburg, 1974, 45
- [8] McCarter, Robert, *Carlo Scarpa*, London: Phaidon, 2013, 12
- [9] Pallasmaa, Juhani, *Encounters*, Helsinki: Rakennustiet Oy, 2005, 142-143
- [10] Steane, Mary Ann, *The Architecture of Light*, Oxon: Routledge 2011, 61
- [11] McCarter, 2013, 164-171
- [12] Steane, 2011, 76
- [13] McCarter, 2013, 164-171
- [14] Steane, 2011, 65
- [15] <http://www.archdaily.com/792096/ad-classics-grundtvigs-church-peder-wilhelm-jensen-klint>, 2017-02-05
- [16] <http://www.grundtvigskirke.dk/file/197134>, *Grundvig's Kirke - a short introduction*, 2017-03-17
- [17] Calvino, Italo, *Six Memos for the new Millenium - Lightness*, New York: Vintage Books / Random House, 1988
- [18] Borthwick, Gail, *Barbican: A unique Walled City Within the City*, Edinburgh: University of Edinburgh, 2011, 46-53
- [19] Rodriguez, Anton, *Residents.*, London: Barbican, 2016
- [20] Ainsworth, Alan, *The Barbican - Architecture and Light*, London: Oblique Publishing, 2015, 19-26
- [21] Treggiden, Katie, *Foreword - Residents.*, London: Barbican, 2016, 13
- [22] Pallasmaa, 2005, 142-143
- [23] *Ibid.*
- [24] Treggiden, 2016, 9-13
- [25] <http://www.archdaily.com/790453/ad-classics-barbican-estate-london-chamberlin-powell-bon>, 2017-02-10
- [26] *Ibid.*

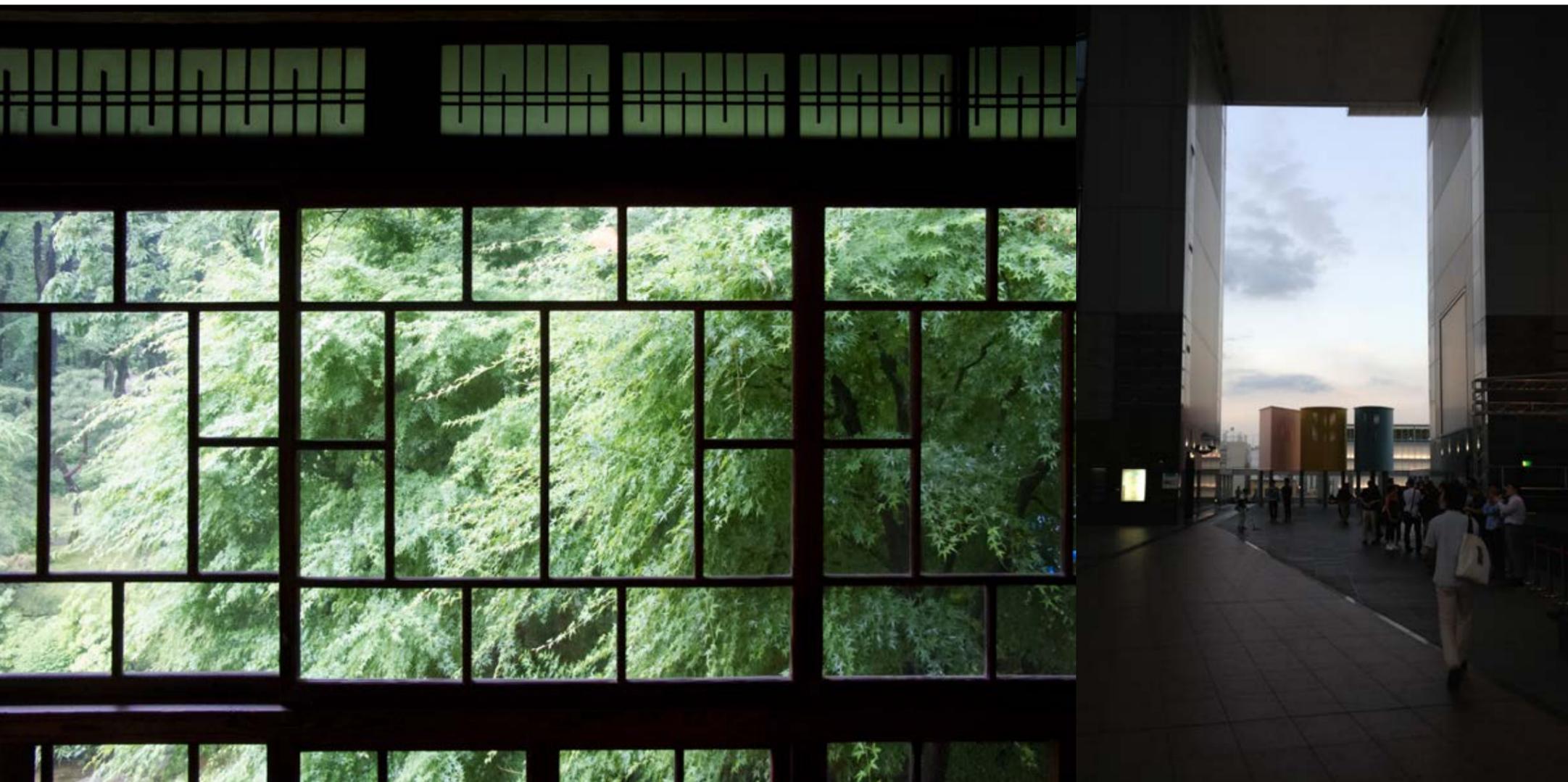
SHADOWS

The Absence of Light

If some architecture places us beneath the sky above and some upon the earth below, then yet another connects us to the infinite inwards. The traditional Japanese architecture of shadows is simultaneously simple and complex. What may seem like empty rooms are actually carefully composed spaces, designed to let the shadows

build their nests. By controlling the natural light through the means of low, hovering ceilings, deep and windowless plans, and a shifting, yet clearly established border of wooden lattice work and translucent screens, the interiors are continuously dark and gloomy all year round. Within the empty spaces and the shad-





Second floor of House of Korekiyo Takahashi, Edo Open Air Architectural museum, Tokyo

Kyoto Station at dusk

ows they provide, the borders of the rooms and consequently the experienced sense of place becomes uncertain. The result being spaces without clear perimeters, connecting the surrounding universe to the world within, by the simple use of shadows.

In all of Japanese culture, layering - of spaces, actions, garments and emotions - provides intricate mazes of depth. Through ambivalent borders and unanticipated sequences of rhythmical shifts in spatiality, our minds and our bodies are encouraged to explore, to examine, and to experience the world around us.

This chapter studies the concept of the many screens of Japan, the allure of the hidden, and the praising of shadows. It is an investigation into how the borders of space and mind can become connected through the dissolving of fixed boundaries, and how this connection can alter our sense of place, through the sheer absence of light.



Torii gates, Fushimi Inari-taisha Temple, Kyoto

THE SCREENS OF JAPAN

A Culture of Layering

We are walking up a winding row of steep, narrow steps, slowly climbing the foot of Mount Inariyama on the eastern border of Kyoto. The road ahead is clearly marked, a tunnel of bright red Torii gates directs a path straight up the wooded mountain. The early evening sun still bright, inside the path the dense gates are providing shade. Most tourists climb the first two dozen steps, take some photos

and return down but we are set for exploration. This path has a purpose and an end, and we are here to see it through.

This land is beautiful. High speed trains and assembled wood, layer after layer of mountains like curtains between you and the horizon, like archive shelves of space. This ancient land is made up of

these mountains, and in the spaces they are not the humans dwell. Temple courts and neon lights, power lines like nervous systems in the sky; rooftops casting shadows under which we go to sleep.

This land is humid, and it is hot, the sun not quite burning our skin as much as it is slowly scolding it. It is late May, and we spend the days jumping from

shadow to shadow, like stones crossing a river. The borders between outside and inside always blurred, Japan is an open country, a hollow country, a sequence of rooms and spaces, of narrow alleys and valleys and forests and gardens and temples and department stores. In the winter it is a cold country, in the summer it is hot. When it is raining it is a wet country. Here, we are closer to the changes of the



Landscape, Tokyo - Kyoto

world. Mid night, we walk outside to the bathroom, cobble stoned hallway open to the skies. Sometimes it rains on our wooden shoes. Somewhere in the distance something is rustling by. Sometimes the wind is here too, although it usually disappears with the last rays of sun. This land is magical, but it is not the stuff of fairytales. It is a magic that has faded in the sun, dulled by generations of spring rains, autumn winds. It has grown with the first buds, withered with the early frost, pulsed in slow motion with the unnoticeable movements of the wooden struc-

tures and joints of the ancient temples, reacting to the changes of the atmosphere. It is the magic of the everyday, and the beauty of a love that is no longer new. It is as ancient as gravitational forces between bodies - the subtlest of forces in nature, yet the most persistent one. It is the grit of night time pleasures and the truth of accumulated time. It is the kind of magic that makes your head slow down and your gut go 'yum'. Japan is old, and at the same time oh so new.



Tokyo streetscape

This land is temple red and lacquer black, the colour of straw and drizzling rain.

Just like the houses, the city is a maze of public, semipublic and private spaces. Even in the megastucture that is Tokyo, the public spaces blend with the private, as the large city context is divided into sequences of smaller, more intimate spaces. The urban fabric merges into a shaded city park and then into the lobby of a museum, or into the more secluded park around a temple, its low horizontal

shadows luring us closer in the heat. At street level, an unseemly elevator takes us to a windowless shop on the 9th floor, on top of which is a bar that we reach through the fire escape. In Kyoto the central station sprawls all the way from an underground food market, through the train platforms via nine floors of department store to a rooftop garden, with restaurants and views of the city. The subway entrance leads to an underground ramen shop, which through a back door leads to an alley of miniature restaurants where everybody smokes and nobody



Rooftop walk, Kyoto Station, late May



Lattice work, screens, light and shadow



Streetscape, Kyoto



Kazuyo Sejima's Shibaura House, Tokyo

eats. The sequences of spaces leading to more spaces are beautifully rhythmic - small becomes medium becomes crowded becomes intimate becomes huge becomes international becomes ancient becomes minimal becomes infinite. The city is a never ending field of exploration, the borders between the public and the private sometimes confusingly discreet.

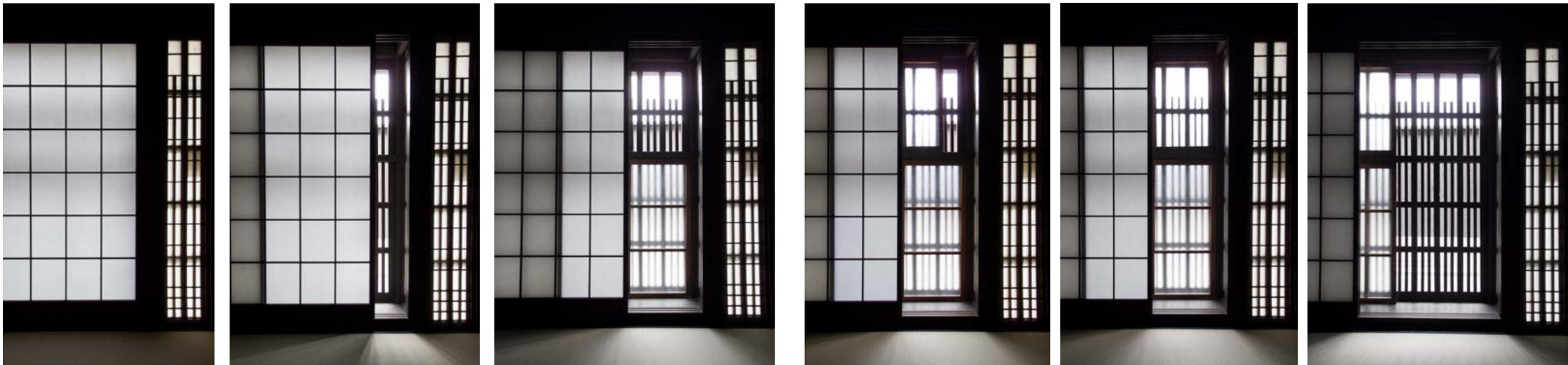
The beginning of an answer might lay in the Japanese definition of 'house', referring to the entire piece of land it inhabits. A Japanese house consists

of both indoor and outdoor spaces, spaces open to the rain, spaces shielded from the sun, spaces capturing the wind and buried deep beneath the shadows of the roof. In traditional Japanese architecture, a dwelling consists of all these spaces, the privacy and intimacy increasing the further inwards you venture. These delicate layers of doors, screens and latticework simultaneously shield off the outside world and ensure a connection to the surrounding, the border between the two not quite so easily established. Because to be able to speak to you about the layers of Japan, I should first and foremost tell

you about the beauty of shoji paper and wooden koshi screens. Thin wooden latticework of increasing density constitutes the first mental border between the public of the street and the privacy of the Japanese house. These layers of wooden screens of different density in combination with a low roof offer an efficient buffer to the summer heat as well as visual privacy for the inhabitants, while at the same time letting wind and diffused light through. For a westerner, to lay awake in the early night on a raised tatami floor in the middle of a city - a slow wind on your skin - and hear the quiet steps of a

stranger three feet from your face, is an altering experience. The Japanese city does not feel like the cities we are used to.

Inside the wooden screens, more screens, of a different kind. A dark wooden grid is covered with translucent shoji paper, with the typical Japanese combination of efficiency and beauty diffusing the daylight let into the room. These moveable screens are used in layers to multiply the possible conditions of light, by a simple reorganisation of the screens. The effect is remarkable. Even in mid



From closed to open - the possibilities of Shoji screens., Kyoto

day, the room is filled with a gradient of shadows, emerging from the corners and spilling out over the floor. It is as if the roles have alternated, and darkness is the controlling element. But shadow, unlike light, does not fall - it seeps; down from the roof and out against the screens, it lingers weightlessly in the empty room.

Used as room dividers the shoji screens become almost more theatrical, a puppet show of shadows from the adjacent rooms. It is like nothing we've ever experienced before, living side by side with these strangers, whom we hear but barely see, but whose silhouettes we soon learn to recognise.

The masterpiece on the subject - the essay *'In praise of shadows'* by writer Jun'ichiro Tanizaki, first published in 1933 - addresses shadows as an intricate part of every Japanese art form. From architecture and religion, to wood prints, theatre and lacquerware, the Japanese aesthetics are linked to depth in both the physical and the spiritual meaning.[1]

Tanizaki prays the shadows, but wherever I look, I see layers at the root of this society. Layers of city, layers of screens. From the layering of shadows to the layered colours of the art of wood print, the stacked roofs of the temples and the infinite layers of lacquerware slowly building up the brilliant sur-

face. A Japanese house is a maze of physical layers, some of which are hollow, living space, some which houses voids filled with shadows. The traditional Junihitoe kimono has 12 layers of garments.

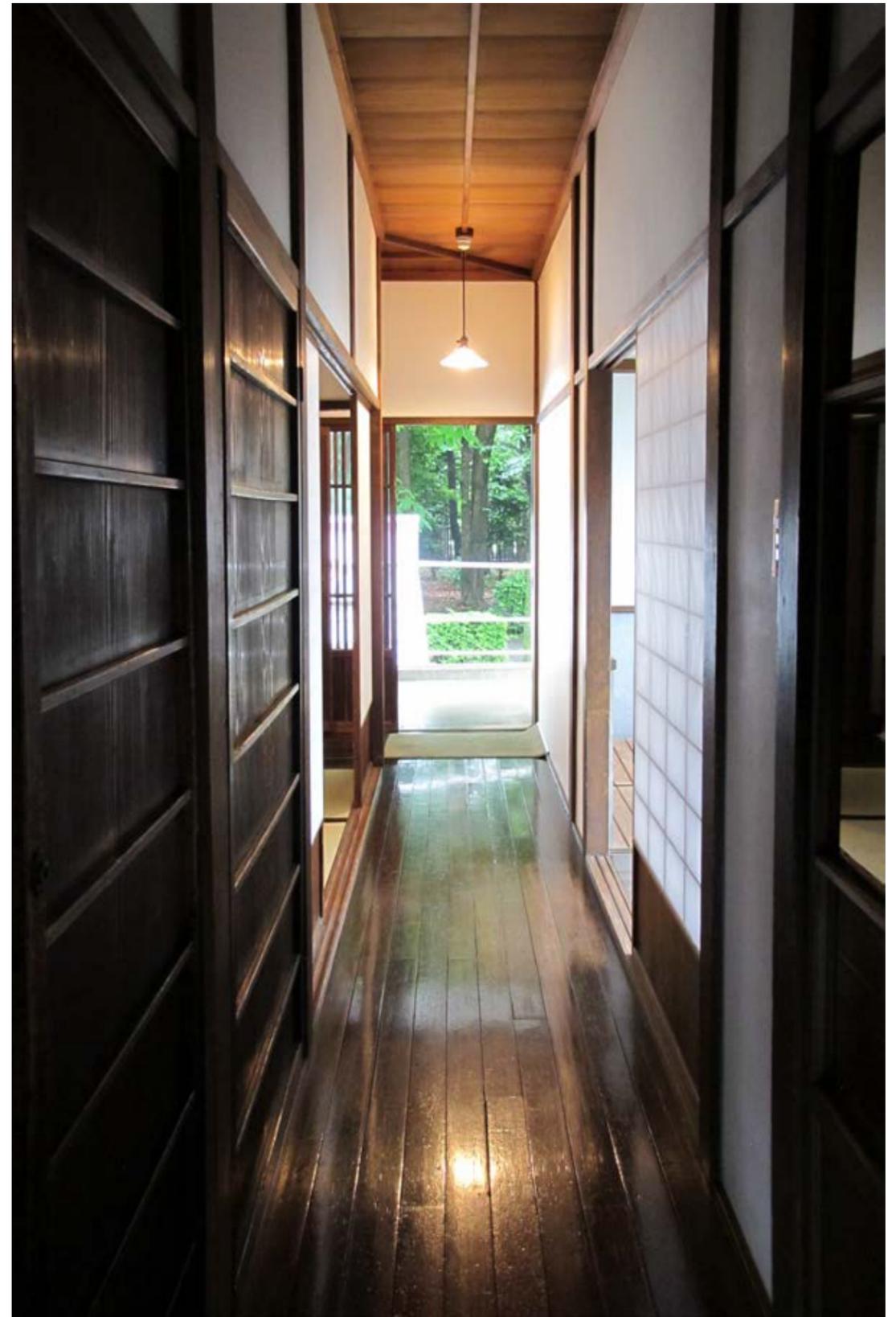
In an interview with Toshio Okumura, Tadao Ando once stated: *'An artist of the Meiji Period, Okakura Tenshin, wrote in 'The Book of Tea' that the meaning of architecture is not in the floor, walls, or ceiling, but in the world contained inside. In exactly the same way, I feel the space contained is the primary concern, and not the walls, floor and ceiling which bound it.'*[2]

Could it be that it is not even the actual layers that is the root of all of this, but the distance between them? The Japanese society consisting of layered spaces; empty, and therefore filled with meaning, innately connected to the infinite. Could this be about depth, and what is truly present in the void?

Because Japan is also, consequently, a society praising surface - of appearances and honour and masks. It is a culture of pride and posture, of the importance of a dignified facade, in which intimacy and privacy are connected to the act of going deeper. By entering these private spheres beyond the surface, a true and valuable intimacy is found. The



Corner and its shadows, Kyoto



Dramatic interior hallway, House of Koide, Edo Open Air Architectural museum, Tokyo



Layers, Kinkaku-ji Temple, Kyoto

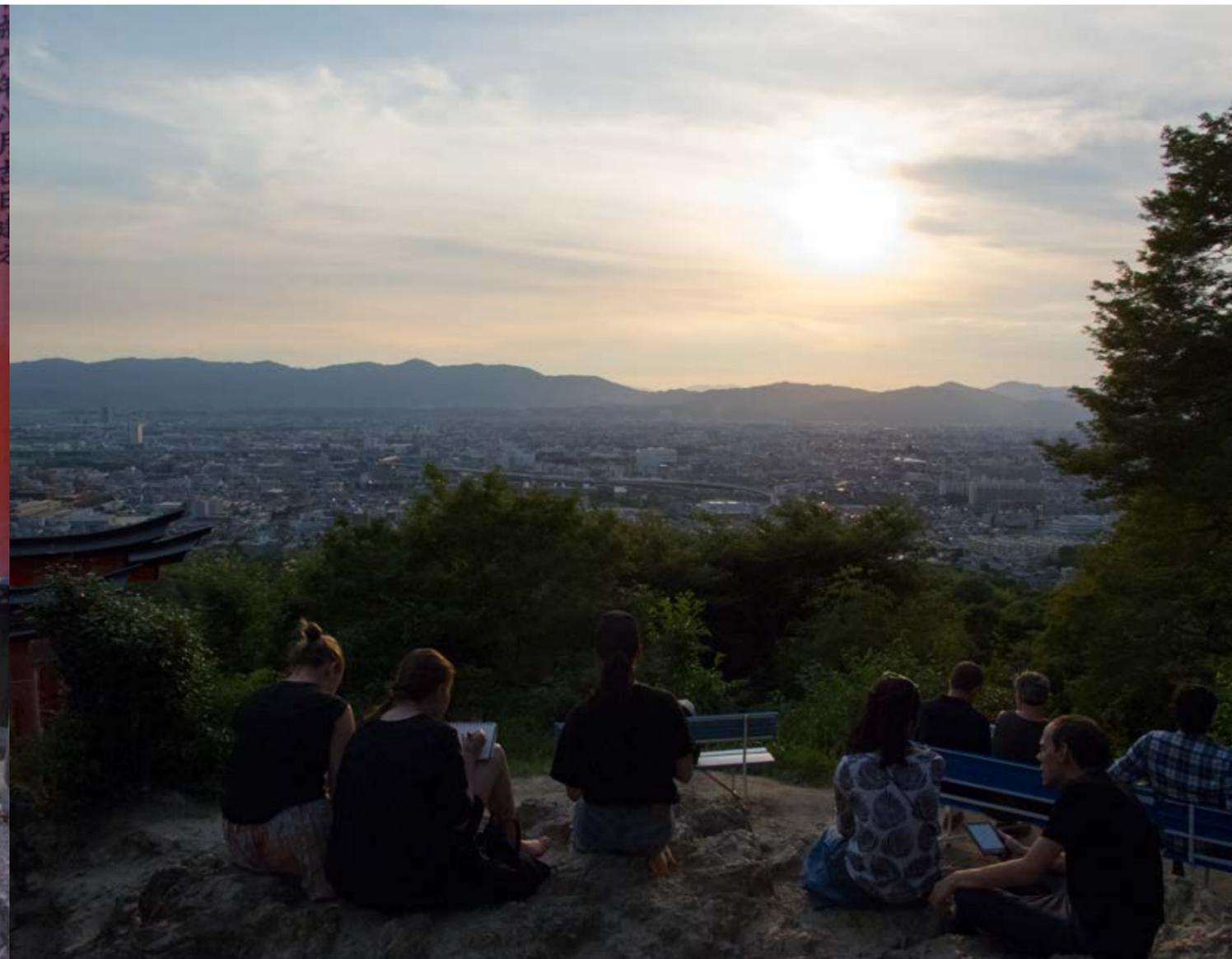
innermost rooms of a house - the innermost feelings of a human being - are truly private spaces. In the many novels of Japanese writer Haruki Murakami the analogy of the well reappears again and again. The protagonist finding himself inexplicably at the bottom of a deep and dry well, alone with his innermost feelings. Only after long and thorough thinking, after altering experiences in the darkness, he is allowed to re-enter the everyday world of the surface. In Murakami's world, the human consciousness is also a three dimensional space into which one must delve. It is a compact, layered experience filled with shadows,

the walls of which are made of damp soil.

Of all this and more, I speak to you between heavy breaths as we slowly climb upwards. I tell you all of this, how this culture of shadows is really - really - a culture of layers, don't you think? I speak of gates and wells and screens and shadows and the cities we have visited. Of accumulated time visible in the surfaces around us. 'A traditional kimono has 12 layers!'

- *'There's just no way of telling what's really going on.'*

Layers, Tenryu-ji Temple



Mount Inariyama with Kyoto below

Meanwhile, we are nearing our destination, the gates are getting sparser and the sun begins to set. Below our feet, the city of Kyoto. Through layer upon layer of red Torii gates we have been lead up the mountain side, our knees somewhat shaky from the climb.

The physical act of ascent in the heat, the beauty of the trail, the monotonic following of the layered red gates

opening up to the scenic views of the city below. We sit in silence with a group of fellow climbers, just watching, resting our legs. The world is not quite the same up here. We have entered the hidden world inside the Torii gates of the Fushimi Inari-taisha temple, and they have taken us here - let us out on the other side of their dark red tunnel. And yet, *of course it is* - exactly the same. Kyoto hasn't

changed in an hour and a half. Kyoto is old. We are two of millions of tourists, sweating over these stone steps. These trees are all older than we are. But to us, this is the furthest away we've been from 'home', the closest to each other for some time. And we just don't see it like we did from below.

THE ALLURE OF THE HIDDEN

Shadows, dreams, trails

SHADOWS AND DREAMS

In the greater scheme of the world, dreams and shadows are related - by nature and by association. They are somehow made of the same anti-matter, the same absence of mass. At the same time, they are *nothing but* matter, a stacking of layers upon layers of clouded depth, obstructing our views both forward and backwards. In shadows, as in dreams, you are exactly where you are, unable to forget that this exact moment is all that's been, and all that ever will be. Stuck in their webs, we have no choice but to slow down.

Light does not have these qualities; despite what we might believe, light is for the brave and for the strong hearted. It is made of power and speed, it floods our lives and fills our days,

deciding the beat to which the world marches. It pulls the rivers that spin the wheels. In that aspect, winter is also related to shadows. Winter and shadows are both absences. They are absences filled with layered mass. Light is the only thing here which does not consist of mass.

Light is what pushes the seeds up from the soil.

There is something invaluable about the places in this universe where borders are blurred, the edges come unclear. Where we can approach, with the greatest of care, the hidden laws of this world of confluences.

Deep down, we know these things already, we understand them on a primal level.





THE BEAUTY OF BORDERS

The German physicist Peter Richter spoke about the Beauty of Boundaries. How everything interesting happens in the borderland between two entities, and how life is concentrated in closeness to these boundaries. In the thin strips where sea and land meet, or where land and air meet, most life forms have their habitat. I read about this in Tor Nørretrander's book "Märk Världen" from 1991.^[3] About how life is lived in the borderlands.

Between body and mind, between my body and yours, between night and day, between awake and asleep, between earth and sky, between light and shadow. In the gaps between one thing and another. And how in the space between the said and the communicated, we make the most sense.

I think about how we live in the space between our bodies and our minds. How we are innately familiar with borderlands, and the inseparable distance that is neither this nor that, but simultaneously both.

I think about how we are familiar with seamless gradients, and so much more connected to the shadows and their infinite depth. How the light from the sun is apart. How it shines on us from afar.

THE UNKNOWN AND THE UNSPOKEN

The allure of the hidden lies in the unknown, and our wish for exploration. But even more so, it lies in the limits of our conscious minds. Tor Nørretrander also teaches me about the capacity of the consciousness, and how little actual in-

formation it can process each second. It is next to none.

The unconscious mind, however, gathers enormous amounts each instant. We communicate with the world largely through our bodies. And our bodies are innately connected to this earth, and the shadows it provides.

The most important parts of a conversation always go unspoken.

Words are cultural markers, designed to transfer enormous amounts of hidden meaning between one person and the next. From the mind of the speaker, a universe of meaning is transferred down into fractional bits of information, that in the mind of the listener can grow into an entire tree of associations and feelings. Meaning becomes information which becomes meaning again.^[4] How do we do this?

How is it that an empty room can evoke the feeling of a universal connection, the sound of rain on a roof instantly remind us of our part in this world?

THE TRUTH BETWEEN THE LINES

The secret forces we abide to lives in the shadows, in the distance, in the truth between the lines and the atomic vacuum we consist of. From the molecular to the nebulous, what *isn't* there is what dimensions our world.

Between the articulated and the intuitive, a world of possibilities lingers. Our conversations are filled with the promises of shadows.



Garden path, Kyoto



Stairs, Tokyo



Bispebjerg, Copenhagen

THE WINDING TRAIL

There is a connection between architectural promenades and conversations, in that our bodies were made to discover. A winding trail will never fail to catch our curiosity, just as a meaningful conversation will our attention. We were made to discover, and the forward movement in space is deeply connected to the forward movement in time. We were made to run, to walk, to discover our world, and attempt an understanding of the unreachable

world of others.

A winding trail, a hidden path or a secret passage - the turn of a corner or the mysteries of a translucent screen. We as bodies relate to the world as a sequence of spatial experiences. We react to the allure of that which is just beyond our reach. We have scale, and this scale dictates our relationship with the surroundings. The flat surfaces of today's

cityscapes, the monotone size of the megalomania. The over-lit parking lots, the empty virtual reality. Does the internet have a scale? Does it have dimensions and form? We are bodies. We are physical creatures. We are in many ways no longer allowed to participate in the world with our entirety. The virtual has no place for physicality, no need for what we are. Babies have trouble reading their parents faces, because the parents faces are turned towards

screens.

The winding trail of spatial experiences does to the body what shadows does to the mind; it encourages us to explore the fluid spaces and the indefinite borders of our world. It allows us to dwell in the allure of the hidden, the potential of the unknown and the essence found between the words. Talking to you was like discovering a new continent.



Stairs, Kyoto



Shadows in the Polish Pavilion, Venice



Tenryuji Temple Garden, Kyoto

THE NAMING OF THINGS

The allure of the unknown is applicable for every aspect of life. Have you ever wondered over the potential loss in the naming of things? In the naming of one thing, which then immediately ceases to be anything else. The naming of things is the linguistic equivalence of the artificial lighting over an autopsy table.

The master of logic and language, the Austrian-British philosopher Ludwig Wittgenstein said that the limits of our language constitutes the limits of our world. Wittgenstein cannot have known about shadows. Is this the curse of man, the compulsory naming of things? When thought exceeds words and we can hold many truths in mind at once,

we are one step closer to the never ending web of consciousness surrounding us. We communicate almost entirely with our bodies, and our bodies knows no words.

There is not one species except man that knows it has a scientific name.

DWELLING

Dwelling is making a home for oneself between the sky above and earth below. To sit, to rest, to exist in the borderlands. Richter was right about that. To be here, on this earth and in this body, means to be simultaneously connected and isolated from everything else.



The Japanese praise shadows because they dissolve the borders of a room - however small - making it, in fact, infinite. With them, they bring the edges of the mind. To sense a connection to the surrounding universe, by the slow, indiscernible transition between light and darkness, house and city, outside and inside. Considering the density of this highly populated island - made of mountains, and in between them, millions dwelling side by side in small, somber confinements - might begin to explain this. A room filled with shadows is never empty, and an edge is not an edge if we can't sense it. Rooftops casting shadows under which we go to sleep; To raise a roof and dwell in the shadows it casts. The sun in Japan comes from above.

But Scandinavian buildings are different. They are often vessels of light, designed to let the sun come in to play. Scandinavia is not Japan. Six months a year, light is scarce. There are shadows in Scandinavian homes too. They linger in the corners and build their nests under

the beds. Through the cold months, they weave their webs around us, sticking to our skin, pulling us under. Shadows without the presence of light is not shadows - it is darkness. Only in the summer months do they cease to be a threat, as the sky is always bright. If Japanese shadows are friendly, a cool and dark contrast to the scolding sun, then the shadows of the North can drown a man on dry land.

As such, dwelling in the North is something else. If the Japanese are raising roofs to dwell in the shadows that they cast, Scandinavian homes are built to make the most out of the limited light available for much of the year. A traditional Japanese house is in itself a borderland, a thing of osmosis, open to the winds, rains, light and shadows, the sequence of public to intimate making it a part of the city fabric. For climatic reasons, Scandinavian buildings are, and must be, closed up units of safety from the cold and the dark. Inside these units however, the same borderland is present, but on a different scale, as light is invited in to keep



23 February 2017, 07:28, Stockholm

the shadows at bay. The moment of osmosis taking place inside the climatic borders of the building, the people of the North spend their lives floating between the dynamic tides of sunlight and darkness, creating spaces by the balancing of the two. By the imposing high summer sky, or the enveloping winter mornings, the connection to the surroundings is opposing, but inevitably there.

Dwelling is the combination of the enclosed and the endless, making spaces for ourselves between the days and nights to come.

The experience of living in our bodies is the same. The grasping of our place in the universe is always a matter of scale, of experiencing the world around us through our senses - as bodies, and how *'breezes*



The Woodland Cemetery, Stockholm

loosely captured can connect us with the very edge of the infinite.' [5]

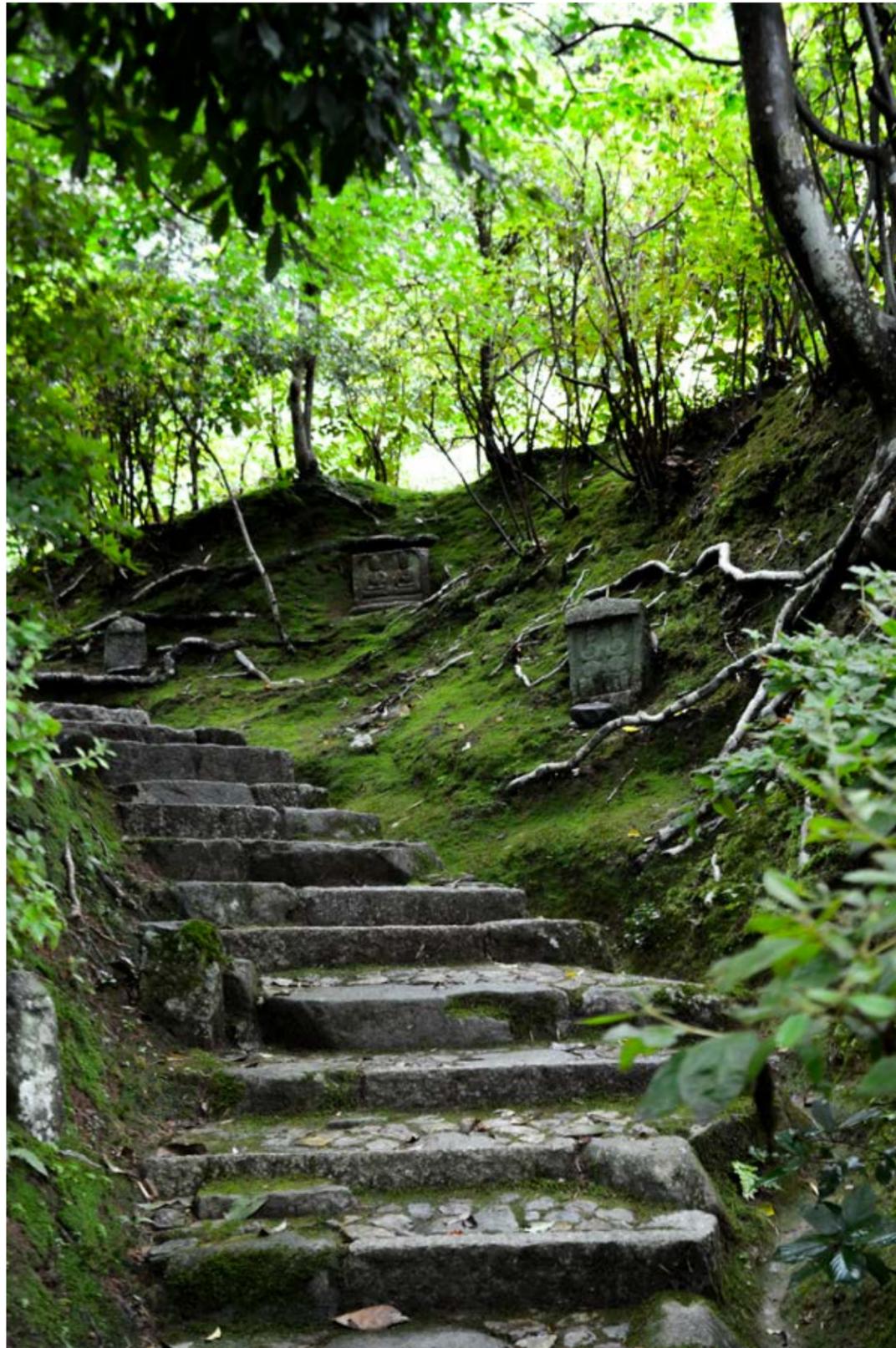
We cannot expect architecture of relevance to survive without any of these things.

THE PRAISING OF SHADOWS

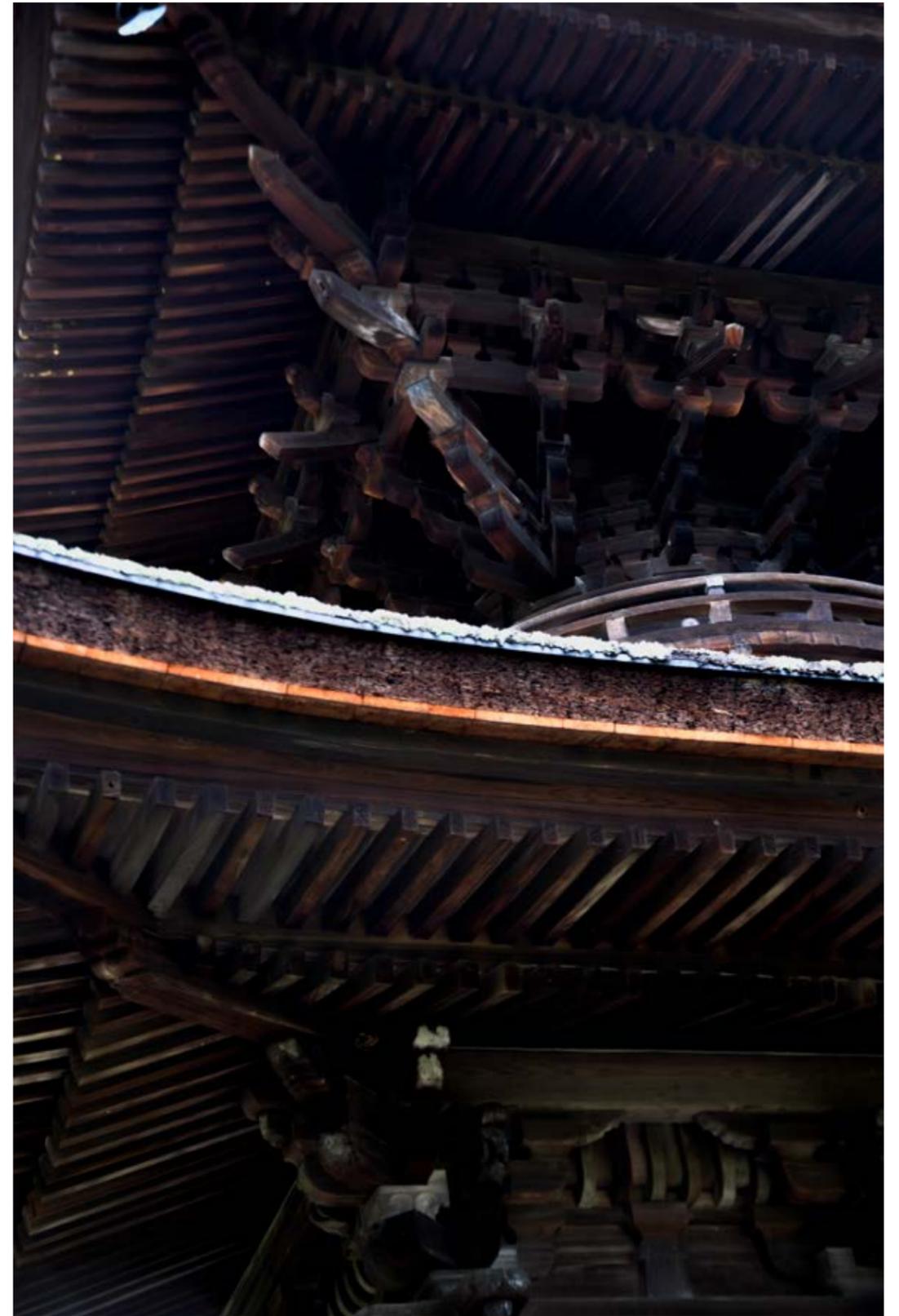
A Photographic Study of the Shadows of Japan



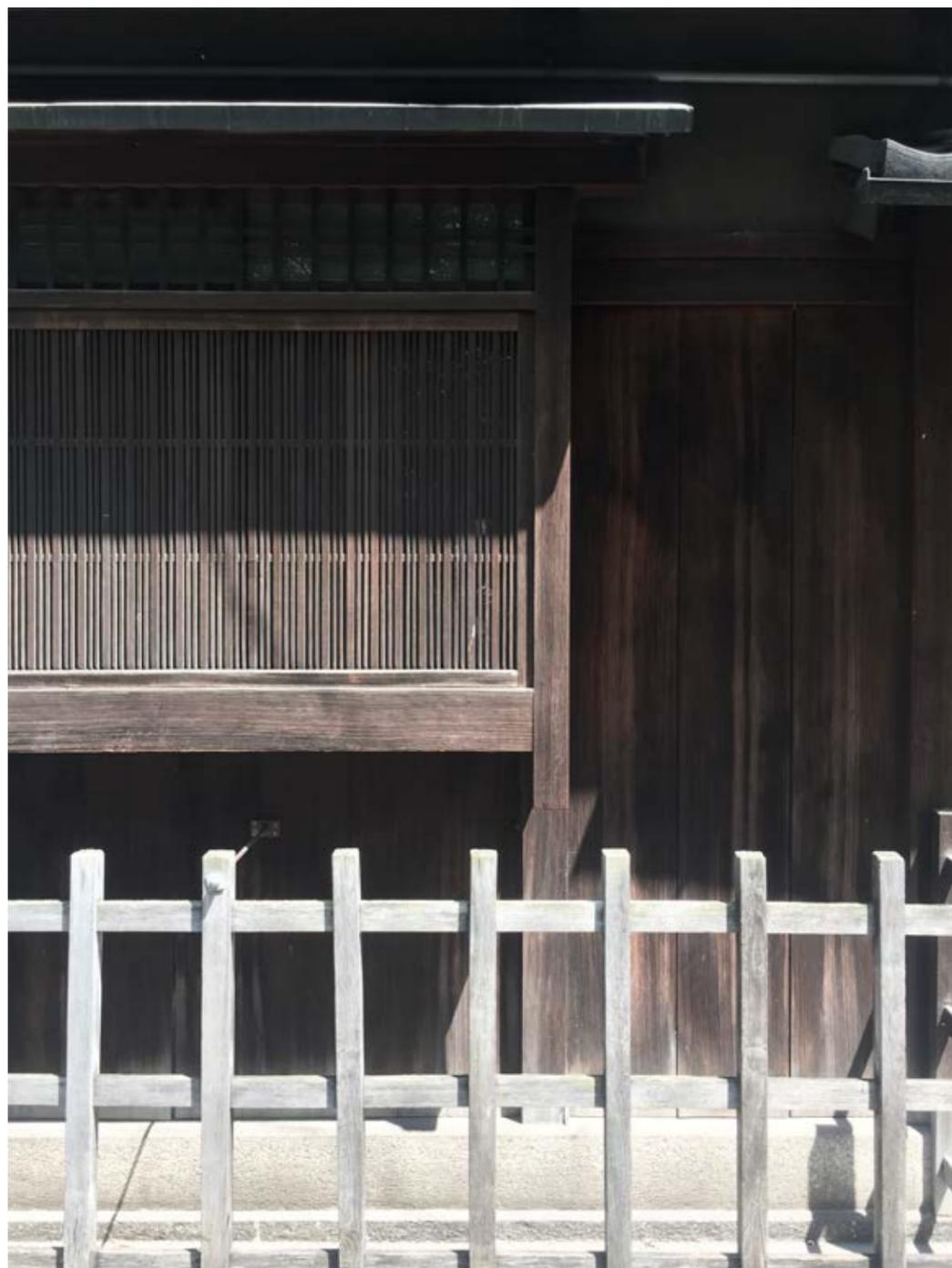
Higashi Hongan-ji Temple, Kyoto



Shaded garden path, Tenryuji Temple Garden, Kyoto



Temple roof, Arashiyama district, Kyoto



Residential house, Higashiyama District, Kyoto



Farmhouse of the Yoshido family, Edo Open Air Architectural Museum, Tokyo



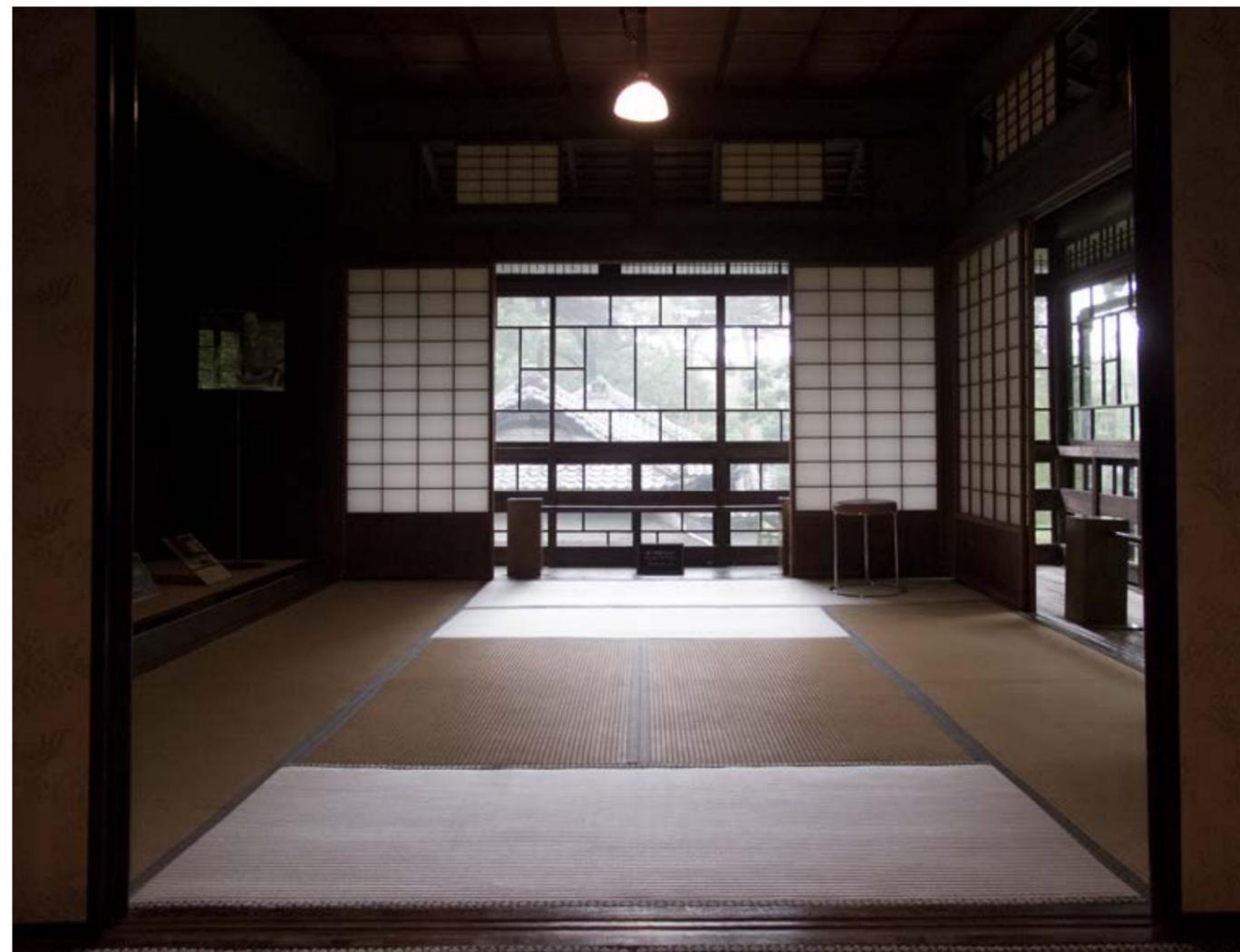
*View towards interior and its shadows, Farmhouse of the Tenmyo Family,
Edo Open Air Architectural museum, Tokyo*



The screened path through the Arashiyama Bamboo Groves



Second floor hallway, House of Koide, Edo Open Air Architectural museum, Tokyo



Second floor of The House of Korekiyo Takahashi, Edo Open Air Architectural museum, Tokyo



Bridge, Shosei-en Garden, Kyoto



Roof construction shrouded in shadows, The Yoshido family farmhouse at the Edo Open Air Architectural Museum, Tokyo

References

- [1] Tanizaki, Jun'ichiro, *In Praise of Shadows*, London: Vintage Publishing, 2001
- [2] Frampton, Kenneth, *Tadao Ando - Buildings Projects Writings, Interview with Tadao Ando - Conducted and translated by Toshio Okumura*, New York: Rizzoli, 1984, 131
- [3] Norretranders, Tor, *Märk Världen*, Viborg: Bonnierpocket, 1999, 491
- [4] *Ibid.*, 131-157
- [5] Moore, Charles, *Foreword - In Praise of Shadows*, London: Vintage Publishing, 2001, 1



Light on pillars, St Peter's Square, Rome



The Polish Pavilion, Venice



St Peter's Basilica, Rome

SPARSE

Light limited

In some places - some environments - it is as though time slows down, the universe leaving you be for awhile. In nature, these spaces are self-explanatory to us, a combination of a feeling of security and a soothing yet dynamic environment, keeping us involved in the slow movements of the universe. They need no introduction, but appeal to our primal understanding of our relative size; in the shade of a tree, inside a natural cave, a living forest, or

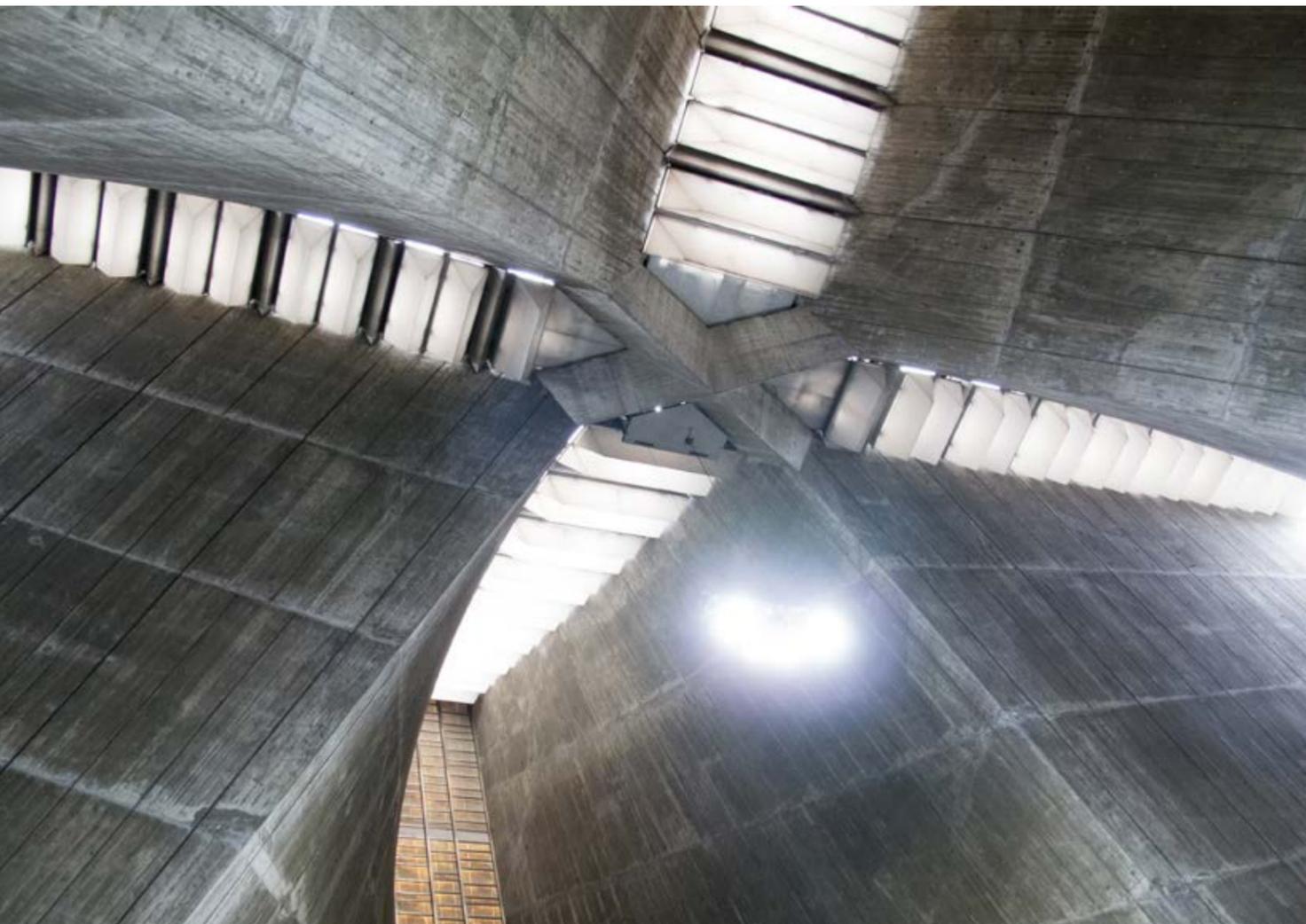
by a large body of water we feel connected to the world around us. These kinds of spaces appeal to something beyond our intellectual selves. They are more often than not places where light and darkness meet.

By directing and restricting the way light is allowed to enter a building, powerful environments can be created. In the same way the Japanese presence of

shadows help to enlarge the psychological sense of space by blurring the borders of the rooms, sparseness of light changes the metaphysical aspects of a space. It is as though the shadows deepens by the carefully measured presence of light, the brightness becomes exaggerated by the surrounding gloom. As the shadows seem to blur the undefinable borders inwards, the light simultaneously stretches it in the opposite direction - pinning it to the present like a

moth to a mounting board.

The four examples of this chapter are theoretically connected through their strict use of natural light. Yet they differ immensely, in method, reason and result. Designed and constructed during the same years, the three buildings of Kenzo Tange and the church of Sigurd Lewerentz have the least in common. As a modernisation of the ancient Japanese



St Mary's Cathedral, Tokyo

tradition of raising a roof and gathering in the shadows beneath it, Tange's buildings are constructional feats testifying to the power of the booming economy. In the St Mary's Cathedral in central Tokyo, the only natural light is led in through the translucent glass of the cross shaped roof, down the curving walls into the large, gloomy interior. The resulting sensation is that of being in a cave, or at the bottom of an enormous well. The National Gymnasiums are instead conceptually large tents, light let into the structures by openings where roof and supporting structure meet and led down the surface of

the curves. Though the hyperbolic paraboloids of the roofs and the steel cables supporting them are technologically advanced versions of the earliest building methods, the shadows that they're casting haven't changed. They still speak to us, on a fundamental level, about the safety they provide.

In the church of St Peter's in Klippan, it is rather the lack of light, the darkness of the brick spaces in contrast to the stark, almost blinding squares of light that is the essence of the genius loci. Not as much the materiality creating the light conditions,



Yoyogi National Gymnasiums, Tokyo

it is rather the scarce light bringing out the full materiality of the bricks. Contrary to the concrete boxes of Tadao Ando - empty spaces created to invite the abstracted qualities of urban nature - Lewerentz church *is* nature, the same as nature, the whole building sprung from the surrounding earth. Brick, the most ancient and common of building blocks, is manipulated to create a complex yet primal world, full with symbolic reason for us to - if not understand - then instinctively sense. By excluding light, the sense of discovery is heightened, the mysteries of the shadows intact. In these spaces, the openings



St Peter's Church, Klippan

to the outside light is blinding, the unknown of the shadows alluring, the slow movements attesting to the passing of time. In the clash, the instant where darkness and light meets, the true architectural drama unfolds. Where one ends, the other takes over, in a shifting cycle as old as the universe itself, and caught between the two; human kind - struggling with the preconditions of existence.

The concrete boxes of Tadao Ando are instead hollow vessels of light, undefined spaces designed to leave room for the indescribable qualities of the



everyday. The natural light is carefully let in, diffused and reflected off the smooth surface of the concrete, a distant yet steady link to the surrounding world. Through the changes in weather and wind, the spinning universe is never further away than the opposite end of the entering rays. Yet ironically it is in that distance, that space between the inside - *here* - and the outside - *now* - that there is room for the present.

The conceptual logic behind the light in Tange's buildings is the most straight forward, deriving from structural innovations and traditional values. St Peter's church is instead in its essence already a ruin, a low brick city with ancient

connotations. Filled with symbolism for us to decipher, its strongest moment in space is still the point where darkness and light collide. The concrete boxes of Ando are somehow related to both; inherently Japanese and of the conditions of our time, they too are spaces designed for the daily spectacle of brightness and shadows, developed from '*the idea of creating an awareness of light by means of darkness.*' [1]

Though connected, the following four projects are examples of the diversity in ambience possible by the means of controlling, taming - carefully directing - the powerful presence of natural light.

ST MARY'S CATHEDRAL AND THE NATIONAL GYMNASIUMS (1963-65)

Kenzo Tange and the traditions of shadows

On the top of a steep hill somewhere in Tokyo suburbia, in the midst of residential houses and soccer fields for school children lies a stranded bird, its stainless steel wings bolted firmly to the surrounding fields of asphalt cement. Even on an overcast day the curved walls are quietly gleaming, fading in nuance from aluminium white to silvery grey with the slightest changes in quality of light. Up here, the surrounding city feels both distant and close, the emptiness and quiet of suburbia contrasting with the scale of the building we're approaching. It is surprisingly large, sprawling its wings in four directions to form a cross, the empty urban courtyard and two story buildings surrounding

it only enhancing the sensation of a stranded solitaire.

The Cathedral of St Mary was finished in 1964, replacing the wooden gothic cathedral that burnt down during the war.[1] In many ways it is a building of its time, a signal of the booming Japanese economy and its influence on everything from technology to building designs. Seemingly from nowhere, Japan as a country went from rural to high tech in a matter of a few years, as much adopting western inventions as adapting them to Japanese conditions and concerns.





Kenzo Tange, born 1913, finished his studies at the University of Tokyo in the midst of a raging world war. He went on to work for Kunio Maekawa, a key figure in the Japanese modernist movement that had apprenticed for and later collaborated with Le Corbusier on the Museum of Western Art.[2] Although a student of the modernist movement, Tange became one of the leading figures in what was yet to come. The economical boom and the urban sprawl of the 60's saw the birth of something else entirely - its ideas of the city as an extendable organism responsible for the brutalist megastructures. The Metabolist manifesto was written primarily by students and colleagues of his in preparation for the 1960's Tokyo World Design Conference. But it was Tange himself that was to develop the ideas further, and introduce them to a broader audience.[3] In doing so, he also established himself as one of the most important architects in the aftermath of the war, and the first Japanese architect to receive the prestigious Pritzker Prize in 1987.

Twenty years before that, Kenzo Tange was exploring hyperbolic paraboloids in multiple projects,[4] using the mathematical predictability of the doubly ruled surfaces to create a link between ancient and future form. The soaring roofs turning into sloping walls, their regular yet organic curvatures simultaneously lifting these modern versions of Japanese temple roofs high and linking them firmly to the ground.



As visitors we enter through a side door, and not through one of the four wings, beneath the organ and on a straight axis towards the altar and cross, as the architect intended. The room is large and diamond shaped, the four curving walls slowly creeping closer together, eventually forming the shape of a cross where a series of sky lights connect them to each other far above our heads. Exposed, expressive concrete and an aesthetically related grey tile floor, dark wooden benches and no natural light except for the glazed slits between one wall and the next. It is a bold move, and one that photographs

well. The feeling is that of being in a cave, but a rather too large one, and clearly manmade.

The room feels neither spacious nor intimate, the curved walls neither closing in on us where we sit, nor soaring free above our heads. The light from the ceiling seeping down the sloping walls, the effect is surprisingly even - as if the surface of the walls was the main attraction in a well respected art museum. It is a display of mans power over matter, the walls turning inwards, upwards and outwards all at once. From the minute we set foot into the cathedral these

walls are in our minds. They are heavy and yet distant, an almost unreal feel to them given by the even light that seem to seep down their curvatures rather than reflect off their surface.

As a result of this even light - this lack of depth in shadow - neither the expressive concrete walls nor the strong light shafts come out as a clear winner. It is a dark space, yes, but one that comes across as gloomy rather than rich. As such, it is a stern space, and an unforgiving one.

I find myself thinking that there is no mystery in these halls, only tamed concrete and repent. No shadows, only gloom. The beauty of the graphic walls somehow almost seem to blend into the floor tiles and the wooden benches, neither of them dark or bright enough to contrast the heaviness of the sloping walls. Floor, walls and furniture all blending together, the relief from

the cross-shaped skylights never seem to reach us at the bottom of the space. With nothing down here to mirror the brightness far above, we are left with the sensation of abandonment. We are left at the bottom of a deep and gloomy ocean, the surface of which we know very little of. I lean over in the silence of the empty room and whisper to you how this feels like Murakami. How it feels like Murakami at the bottom of a well, how it feels empty like the prairies of the ocean. Only where the skylights running down the sloping facade finally meet the floor is there a little room to breath, the nearest light reflecting off the tiles allowing room enough for the concrete walls.

It is not that the concrete isn't beautiful, or the skylights mesmerising - on the contrary. Each of the architect's concepts are equally strong. The ceiling cross of light, the dark concrete walls and the muddy bottom of the space all







compete for our attention in a way that feels less like the graspable clarity of the enlightened, and more like man's futile attempts to interpret the complexity of the message. The weight of the world in here is heavy, the scale unforgiving, the light moving slowly as water under the winter ice. It is not hard to be overwhelmed.

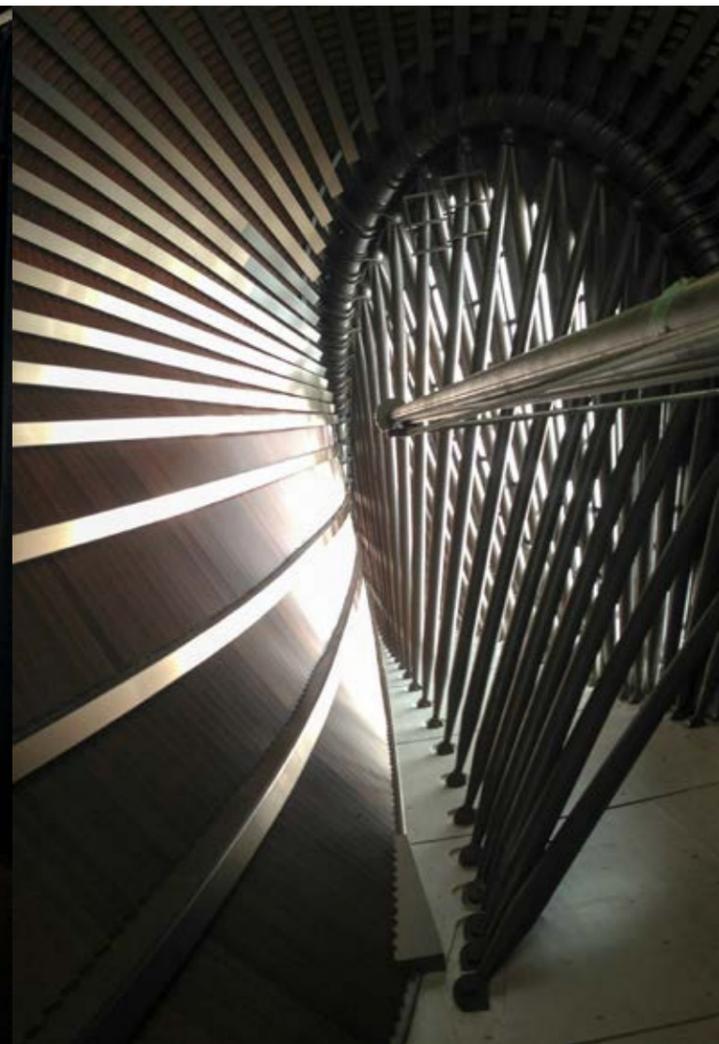
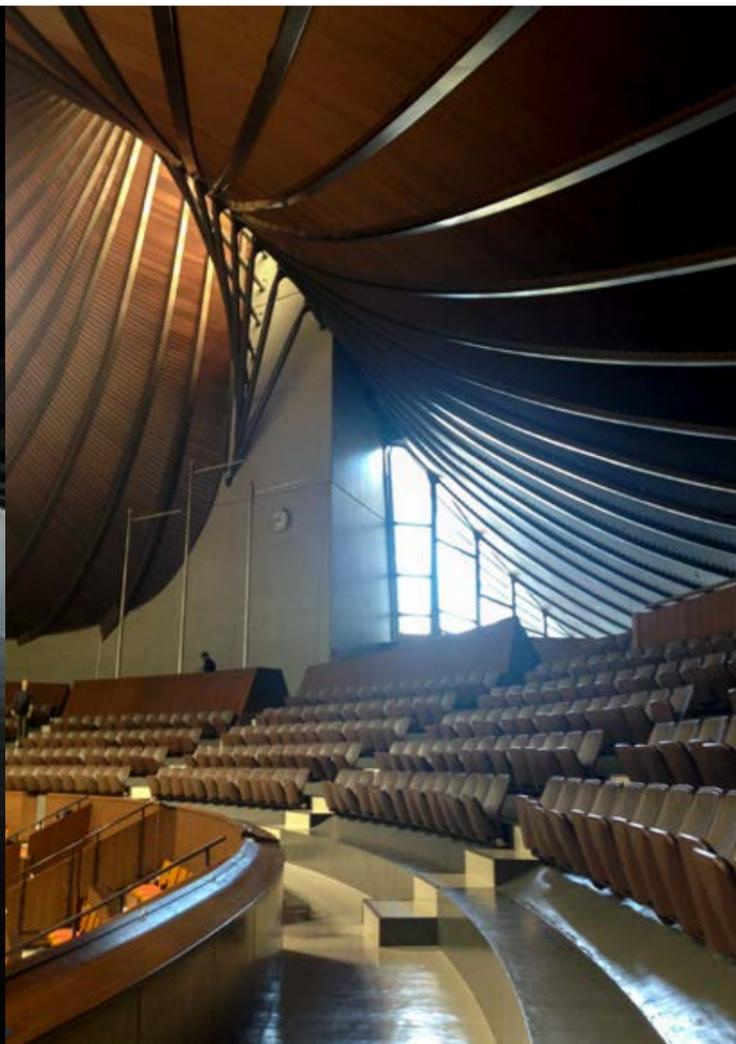
Two other of Kenzo Tange's buildings a short sub-

way ride away bear similarities at first glance. The National Olympic Gymnasiums were constructed during the same years as the St Mary's Cathedral and with similar concepts. The hyperbolic paraboloids are here used to create what was at the time the largest spanning no-support roof in the world. [5] If the cathedral is a concrete cross, pulled outwards and downwards to expand into a hexagonal plan, then the national gymnasiums are tent-like

constructions, pulled up and around their own supporting pillars, using the tension of the shell form to support itself. In all three buildings however, the roof and walls are the same, and the natural light admitted into the interiors is scarce.

But the difference in sensation is extraordinary. As we approach the entrances created in the inevitable void where roof meets ground, we are approaching

the soft shadows of a tent, the depth of darkness under a tree in summer sun. Entering the main halls, our eyes take a little time to settle to the richness of the shadows. And though the rooms are large, there is an intimacy and a comfort in the proportions and the dark interiors, a softness to the relation between human and space that is nowhere to be found in St Mary's Cathedral. Here, the scale is comforting and the enormous organic structure pleasantly Hoover-



ing over our heads, the light conditions familiar to us. Reminiscent of a protecting tent or a large savanna tree, the space is alluding to the root of the human condition to dwell. The light is softly present, enhancing the richness of the shadows by its subtle, gleaming pattern.

We are not abandoned. It is a question of scale, yes, but also curvature and the qualities of the surfaces leading the scarce light deep into the building.

The latticework of the roofs allow a complex depth upwards and inwards, making the roof itself not a surface but a volume, cultivating the movement of light, as shadows are allowed to grow between them. There is nothing threatening in the darkness of the room, nor is the presence of the heavy roof alarming; as the benches curve up the roof curves down to greet us. It is the safety of shadows, the ancient tradition of raising a roof and then gathering underneath it. These roofs are elegant, soaring,

made possible by modern materials and techniques, but they are in every aspect Japanese, a natural evolution of the soaring temple roofs and the shadows they provide. They are not two dimensional objects, but three dimensional spaces where light and darkness coexist. And as the light is led down the curving roof, through it we are connected - to the volume of the room, to the roof itself, and consequently to its zenithal and old familiar source, high above our heads.

The walls and roof of St Mary's are something else entirely. Perhaps the hierarchal sensation of the cave-like space was just what Tange imagined when he thought of catholic faith; a sacred source far above human reach. As for the National Gymnasiums, their enormous roofs are spectacles of shadow and light, making the huge shapes understandable, relating to centuries of temple building in Japan.





CHURCH OF THE LIGHT (1987)

Tadao Ando and the essence of wall

'Like the moment when a ray of light shines into darkness / as life begins in space' [1]

The city of Kyoto is wedged between three mountains, its urban edges creeping close upon the ancient temple sites climbing the heavily vegetated hillsides. Like a horse shoe turned upside down, the mountains have been holding the city close throughout the centuries, through the hot and humid summers, the biting winter nights. Surrounded on three sides, the only direction the expanding city can grow is south, following the Yodo river towards the Osaka bay - and so it does. We are somewhere in the sprawling suburbia connecting the southern

rims of Kyoto with the northern edges of Osaka, and we are quite possibly lost.

This is the land of Tadao Ando; born and raised in Osaka, this is where he started his architectural office and this is where it is still situated, the region the home of so many of his most groundbreaking projects.

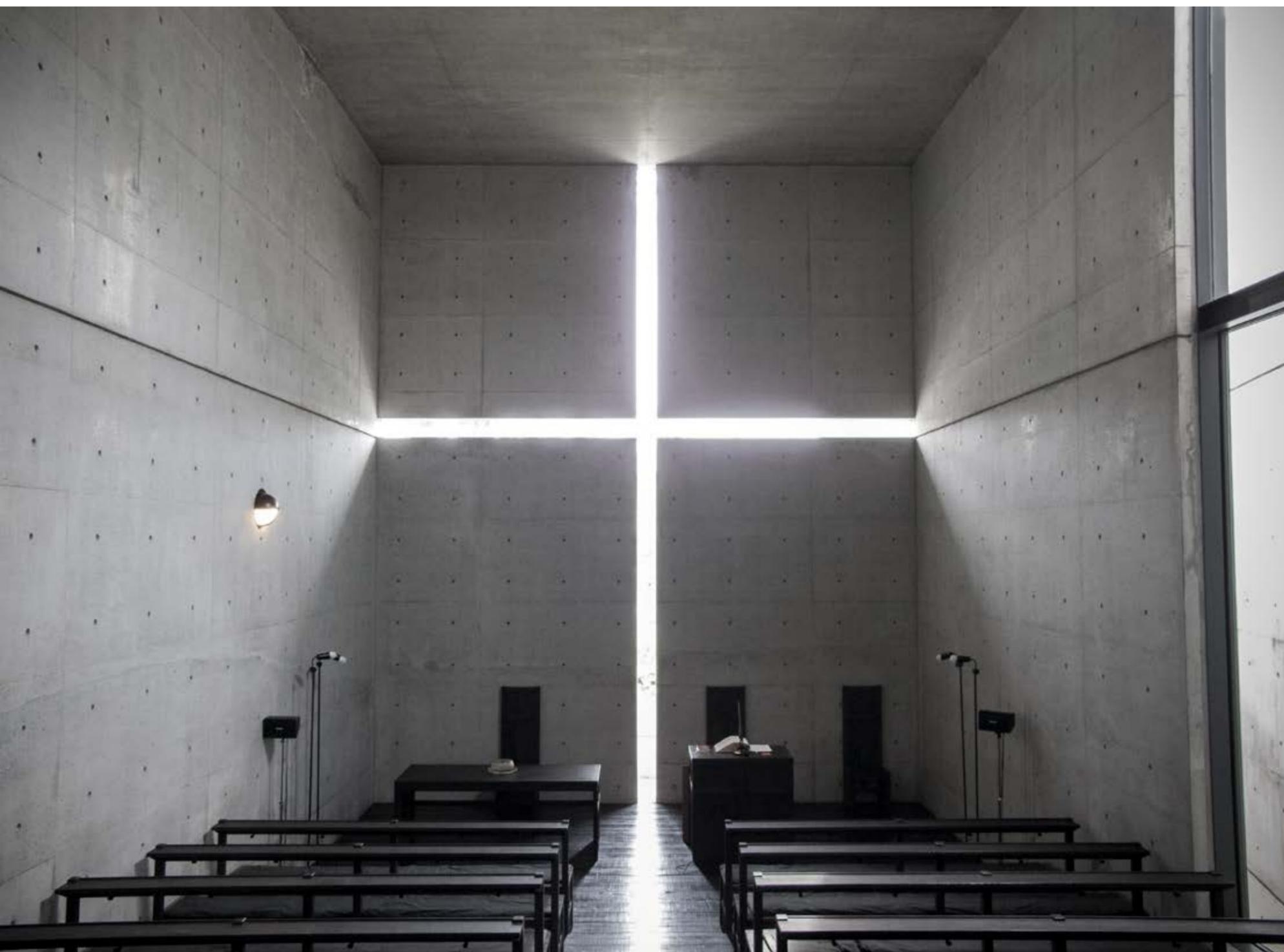
It wasn't easy getting here, but here we are. As in every other instant of every other day, we are *here*, and this particular afternoon *here* happens to be a tree lined suburban street in western Japan. Two story houses and parking garages, newly mowed

lawns and electricity poles - this land is old but the streets all look new. The bus we just jumped turns a corner further down the street and disappears, and we are left with randomly picking a direction.

There is absolutely no telling that we are minutes away from one of modern architecture's most acclaimed buildings. A kid rushes past us on a small yellow bike. It's a slow Sunday afternoon in Ibaraki, half an hour by train from the centre of Osaka. Suburban life is running its course, and we are probably not the first westerners in round glasses and sober clothes they've seen wander aimlessly around the blocks.

But around the nearest corner and a little further down the road and we have reached our destination. From a far the small concrete box is half hidden behind trees and electrical lines, the cars on the adjacent parking lot. It is completely closed to the streets surrounding it on two sides, except for the thin signature incisions in the shape of a cross, dividing the thick front wall in four in a way that seems to be defying gravity.

We enter from the other side - around the back of the building we find a small courtyard connecting the original worship hall with the mirrored meeting facility and Sunday school added ten years later.



Directly to our left, an L-shaped wall meeting the building at a 15° angle and cutting through a large glazed section offers a way in. The wall continuing through the space and slicing through the back wall of the church is dividing the entrance from the single room of the church. The first thing we meet is a silent, light filled corner; slowing us down and preparing us for the transition into the gloomy interior. Directly on our right is a dark, empty opening in the wall, its contrasting shadows pulling us in.

The room is small but to the point. It is calm, refined and yet simple, with beautiful proportions; the volume of three spheres of 5900 mm in diameter put side by side.^[2] The simple cedar plank floor slopes down towards the front wall and the light cross dividing it. The height slowly increasing down towards the altar, the room is still somehow embracing us, the directed light reflected off of the near-black floor like moonlight on a lake. Despite the straight angles and the square plan, there is something organic about the space, something natural about the restricted light conditions and bare, concrete surfaces. It is simple in the way that nature is; uncomplicated yet sophisticated in its lack of doubts. In its proportions and its straightforwardness, it is a truly doubtless room, the softness of the concrete walls so beautiful against the roughness of the crude wooden floor and unpretentious benches. More than separating the entrance from the main



hall, the angled L-shaped wall piercing the room works as a diffuser, leading the light in between the side of the building and the freestanding plane, and reflecting it into the otherwise closed box. The reduced and at the same time enhanced use of light simultaneously enlarges the sensation of the space, and emphasises its boundaries.

From necessity and economical restraints the church is simple - in form as well as technical solutions. There is neither heating nor ventilation systems installed, and the simple concrete box was not an option but the only plausible solution. At one point the architect was even forced to consider a roofless,

open air space, as construction was stopped due to financial difficulties the project was facing.

But more so, the room is simple by choice, Tadao Ando stripping the church of any symbolism or decoration, wanting to *'create a richer place by eliminating from the space all nonessentials.'*^[3] There is something extremely strong - almost too strong - in the metaphorical image of the cruciform of pure light, which only seem to work in contrast to the subtleness of the otherwise silent space. The *'Church of the Light'* is in its essence a shell - a cubistic version of the cloudy Bagsvaerd roof, encapsulating the changing sky inside its glowing walls.

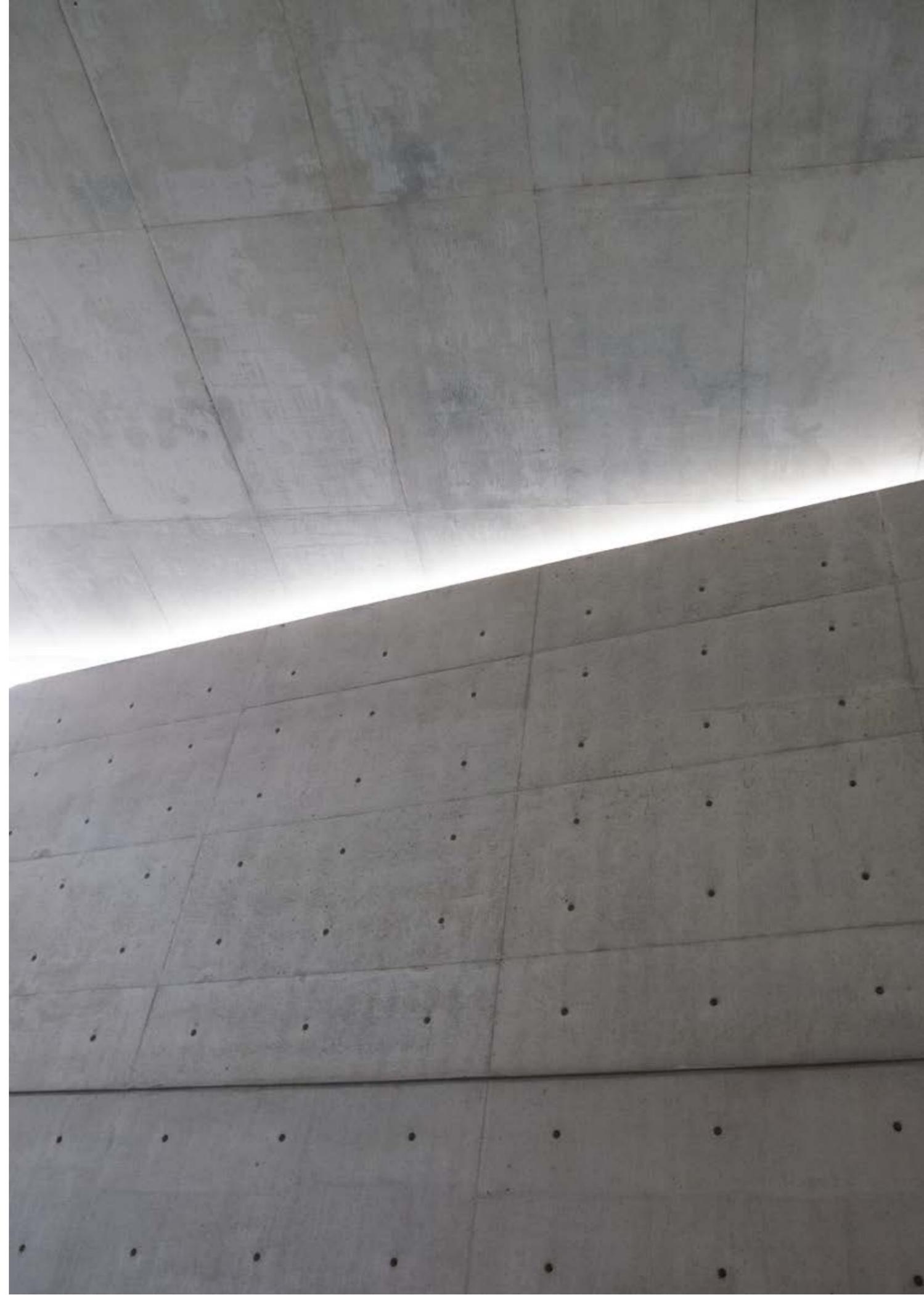
Ando's concrete is nothing like the rustic concrete of the Japanese metabolists or the English brutalism. It isn't heavy, and it isn't hard; it is part of a different revolution. When the 60's saw the enormous economical growth that enabled the large scale architecture of established architects like Kenzo Tange and his contemporaries, Tadao Ando was busy growing up. The world wide counter reaction that was to come, turning its back on the increasing focus on capital and industry, was lead by the young. During the student revolutions leading up to the Tokyo riots of 1968, Ando was watching attentively from his childhood Osaka, getting ready to start his own architectural office.

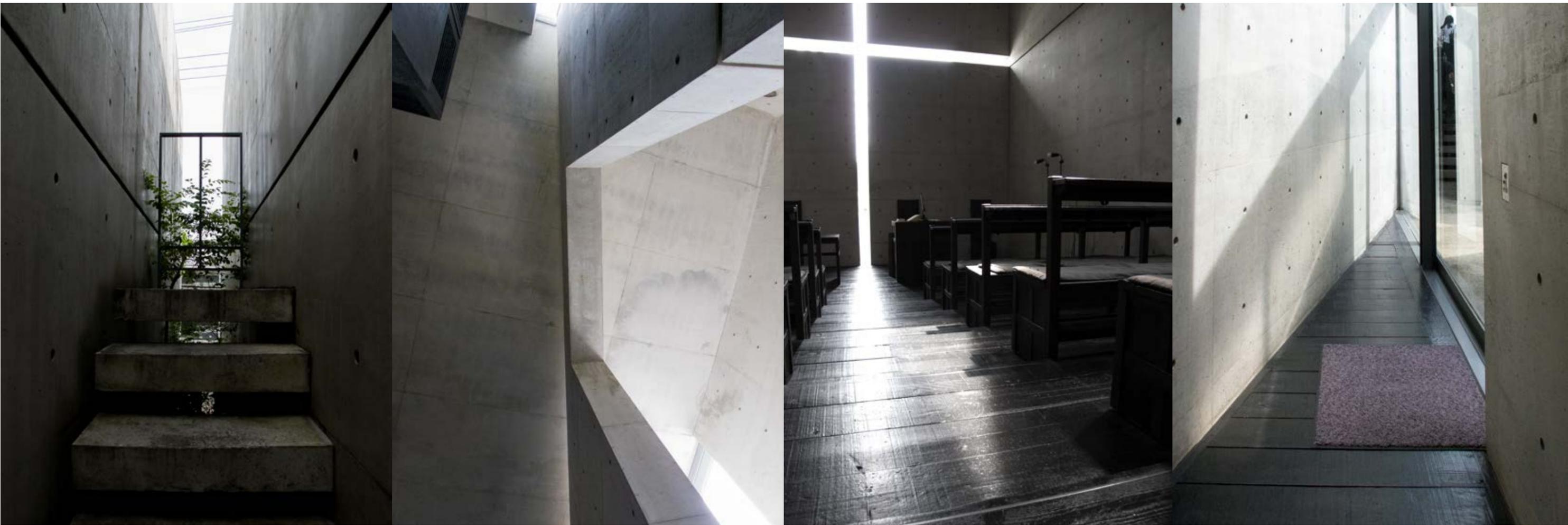
Even though the riots were eventually restrained and the 1970's saw an undisturbed growth of industrial scale developments, something had rooted itself firmly in the minds and hearts of the young generation, biding its time. *'[...] I had been in my twenties in the 1960's and witnessed a moment of social upheaval; in me the spirit of resistance of the time still lived on.'*^[4]

A decade later, Ando received international acclaim for his first project in concrete, a row house on a narrow lot between two adjacent houses in Osaka. The small plot, 3,3 x 14,1 meters in dimensions, is completely filled with a concrete box, and the outside

walls entirely closed from the exterior except for the small entrance doorway, centered on the street facade. The narrow plot is then divided into three equal parts, leaving the middle part exposed to the natural elements. This roofless atrium also houses the circulation between the two floors and the two buildings of the plot, meaning the route between for example bedroom and bathroom, or kitchen and living room is under the open skies. But as Ando himself points out in his essay *The Public Character of Architecture*, this is in no way done without consideration for the inhabitants and their comfort. On the contrary, it is an act of establishing on a small and difficult site, an enclosed and private domain where the residents can live as a part of nature. 'After giving serious thought to [...] what dwelling was all about, I decided to maximise exposure to changes in nature, whether gentle or harsh, even if it meant sacrificing some convenience[...].'^[5]

All of his projects combining architecture, nature and the human connection to the two, Tadao Ando is very much a part of a continuing movement trying to bring back the individuals right to dwell, to live, to express oneself in contact with the mysteries of the surrounding world, despite an increasingly capitalist society.^[6] Even in high density urban areas, the seemingly closed off concrete boxes he creates is actually the opposite - connected to nature through its abstracted urban forms; light, wind and rain. These natural elements, referred to by Ando as 'urban nature', is brought deep into the constructions in the same way the natural elements have always been part of traditional Japanese architecture - bringing with them an inherent connection the





universe. The Japanese word for house has always meant the entire plot, including the surrounding gardens and in between spaces blurring the borders between inside and outdoors. In the urban jungles of modern Japan, with their cityscapes of neon and concrete, Ando realised that though not visible, nature was still present. In the form of undisturbed light, wind, rain and snow, the dynamic changes of the seasons were still to be found.

And so it is that the concrete of Tadao Ando is so different from that of the previous generations. If the white walls and pilotis of the modernist movement was the abstraction of the idea of 'wall' and

'house', then the brutalist movement brought the earth back into the equation, firmly rooting its concrete masses to the ground, the light to its rich and heavy surfaces. And if the brutalist concrete seems a mix of equal amounts cement and earth, then the concrete of Ando gives the impression of being half stone, half light. It is the hushed architectural framework for a life lived as a part of nature, be it the post modern, abstracted version of urban nature in the ever-expanding megacities of today.

It is as though the heavy walls lack weight altogether, their silky surfaces distributing the indirect light evenly, ethereally, the concrete softly glowing, as

was it lit up from within.^[7] Ando's walls are more like the essence of wall than the physical representation, they are the idea of wall, of solid, of enclosure, but in the softest interpretation of the word. Through the course of day and night, of seasons and years, the light comes and goes, inhabiting the spaces, growing, shrinking, filling up the void with brightness and then slowly - as night falls again - turning into a room full of shadows.

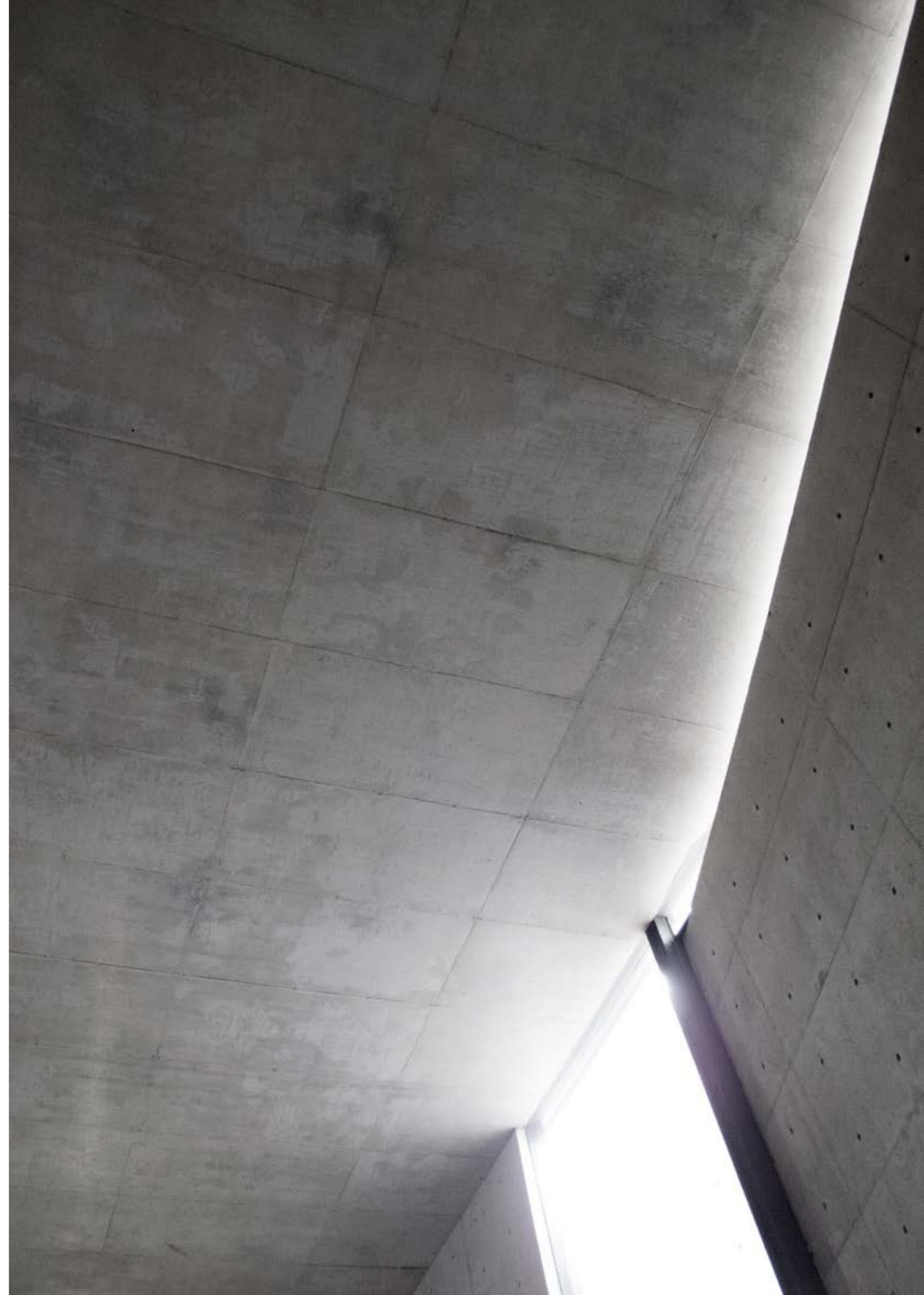
The seemingly solid idea of a concrete wall is in the hands of Ando nothing less than the natural evolution of the dynamic shoji screens of traditional Japanese houses, filtering the brightness of the day-

light evenly, into a more or less gloomy, secluded, yet highly dynamic interior. The in situ moulding structures are built by skilful craftsmen and their insides sometimes even waxed before the pouring of the concrete, to ensure the smooth texture of the finished walls, and the perfect alignment of the different parts. This is often, as in the case of the Church of the Light, combined with indirect lighting reflected off external walls before entering the building, or dynamic direct light only entering a room from one direction. The result is a mixture of dynamically lit, dreamy spaces of ethereal light, and dramatic direct rays of sunlight playing over smooth concrete.

'The fundamental image of darkness found in parts of some traditional Japanese homes overlapped in my thinking with the idea of creating an awareness of light by means of darkness.' [8]

Tadao Ando's walls derive from a will to frame, seclude, enhance and enlighten - to provide shelter and space in the increasingly overpopulated modern cityscapes. At the same time, to bring nature into buildings and make them part of the bigger scheme of the universe, regardless of a scenic rural setting, or a cramped urban plot. And by bringing these changes - in light, temperature and season - into these interiors, to make them spacious despite their confinement in space; bright despite their restrictions in natural light, limitless despite their clear limitations. To make them part of the natural, ever changing world around them; through wind, light and rainfall connected to the furthest edges of our understanding. In a sense, to make them infinite.

If the sun never knew how beautiful it was until it hit the face of the walls of Louis Kahn, then the concrete of Tadao Ando explained to the sun the true essence of wall, turning the light itself into a part of the construction.





ST PETER'S CHURCH - KLIPPAN (1963-66)

Sigurd Lewerentz and the Weight of the Built

During the years between 1963 and 1966, while Kenzo Tange was busy calculating hyperbolic paraboloids with the help of clever engineers and Tadao Ando was developing a healthy resistance towards the capitalistic system, something quite extraordinary was silently taking place 5.000 miles west of Japan, in the small Swedish town of Klippan.

Sigurd Lewerentz was 78 years old when he was asked to design the new church for a small Lutheran congregation in the southern parts of the Nordic country. A few years earlier, word had spread

through the world of architecture that with the finishing of St Mark's Church in suburban Stockholm, some things had undeniably, irreversibly changed. The unforgiving use of brick, of *'matter as a basis for form'* [1], and the inseparability of intention and built was simultaneously completely new, and sprung from an ancient tradition. With it, modern architecture had taken its first step towards going full circle, proving that some conditions of the human experience are in fact eternal. [2]

Lewerentz was at this point an old man, with over 50 years of experience in the art of building. His

architecture had developed from the most sensitive of Swedish Grace, through the strictest of modernism, into a humanistic but severe brutalism, heavy with symbolic meaning. [3] In everything he did, he did it unconditionally. But like the ancient temples of long forgotten civilisations his works go undeciphered, as he never discussed his decisions, choices or motifs. Their mysteries are still intact, understood primarily on a primitive level, with our bodies rather than our minds.

With the commission for the church in Klippan, Lewerentz was given the possibility to continue the

discourse he had started with St Mark's. The park in which the church is situated had been donated to the congregation a few years earlier, and within this garden, within the loosely woven context of the small, surrounding town, he was to create his masterpiece.

It is completely made of brick. Dark, red, local brick of standard size - never cut or adapted.[4] As we approach the church our first impression is just that; a low, fragmented and complex little world of its own, entirely made of monochrome, earthy material. Only - it is not. The militant uniformity of the

stones - in size as well as shape - means that the mortar has been allowed to take on a new function. It is no longer merely glue between neat rows of stacked blocks; it is thick, billowing matter, filling the voids and crevices between the unruly bricks. At places the mortar is itself the supporting matter, holding up the scarce pattern of bricks. To accommodate this new function of the otherwise secondary matter, the mortar had to be mixed with flakes of slate [5], its natural attributes pushed further than ever before.

It is a church of mortar and bricks, joined together in a uniform, inseparable mixture. One is tempted to believe that the dogmatic treatment of the building blocks was an old masters way of enhancing his abilities by increasing the number of conditions. It also demanded of him an almost daily presence on the building site, calculating continually the differing spacing of the bricks, angles of the joints and mixtures of the mortar. But in doing so, he forever broadened the possibilities inherent in the manmade stones, elevating the most common of building materials into something completely new. In the words of Adam Caruso: *'To make an extraordinary material special, is banal. To heighten one's awareness of a humble material like brick, is poetic.'* [6]

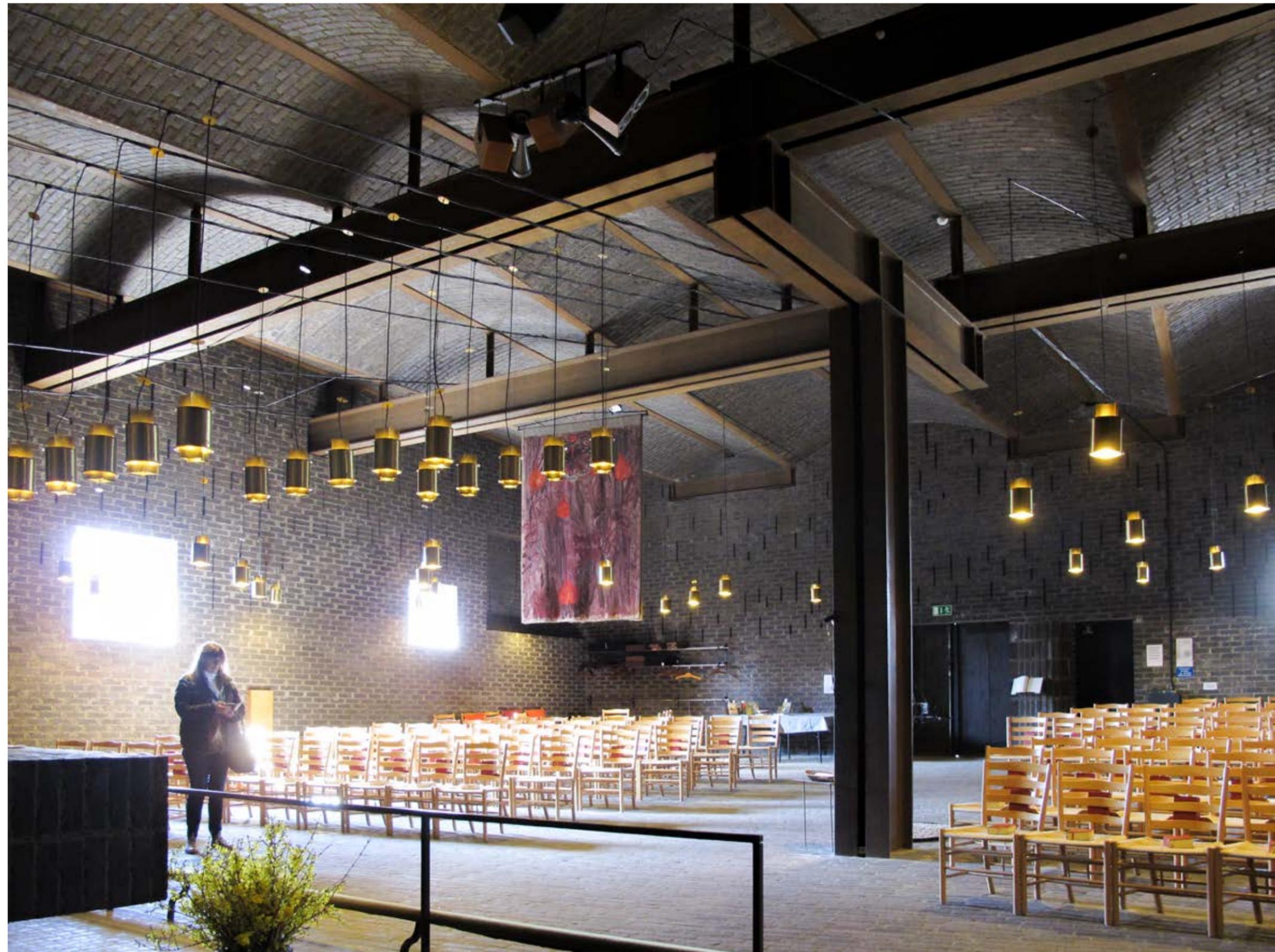
On the symbolic meanings incorporated in the low heavy church, its wavy roof of uneven arches and its slanting brick floor drawing us in the direction of the altar, more than one book has been written. Lewerentz had an amazing ability to instill symbolism into the built without ever settling for the clichéd.



In such manner, the Cor-ten steel abstraction of a cross holding up the roof of the church is more of a cross in this manner, than had it been a strict replica. The cross is given a physical meaning - the responsibility of holding up the roof of the church - and a physical representation that responds to that responsibility. Hence, the strictly structural problem of securing the arches of the brick roof is given a beautifully poetic solution.

The honest functions of the separate parts of the building not only bring them meaning, but make them truer versions of themselves. Nothing here is pure symbol, yet every part is infused with symbolism. Together, they form a uniform entity, the parts of which are hard to separate from the whole. For this text however, we will look closer at the ambience of the space, rather than the technical aspects of the built.

We enter through an understated, almost hidden door at the end of a recession in the building volume. Had it not been for the signs, it would have taken us some time to find it, wedged between the body of the church and the bell tower. This is an intimate entrance, built with the fact that members usually arrive separately or in small groups in mind. The entrance is not in focus, it is the exit - the large double doors opposite of the altar leading straight out onto the large water mirror, that is the main event. It is the joint movement of the group from darkness to light after the sermon that is the buildings architectural crescendo.[7]



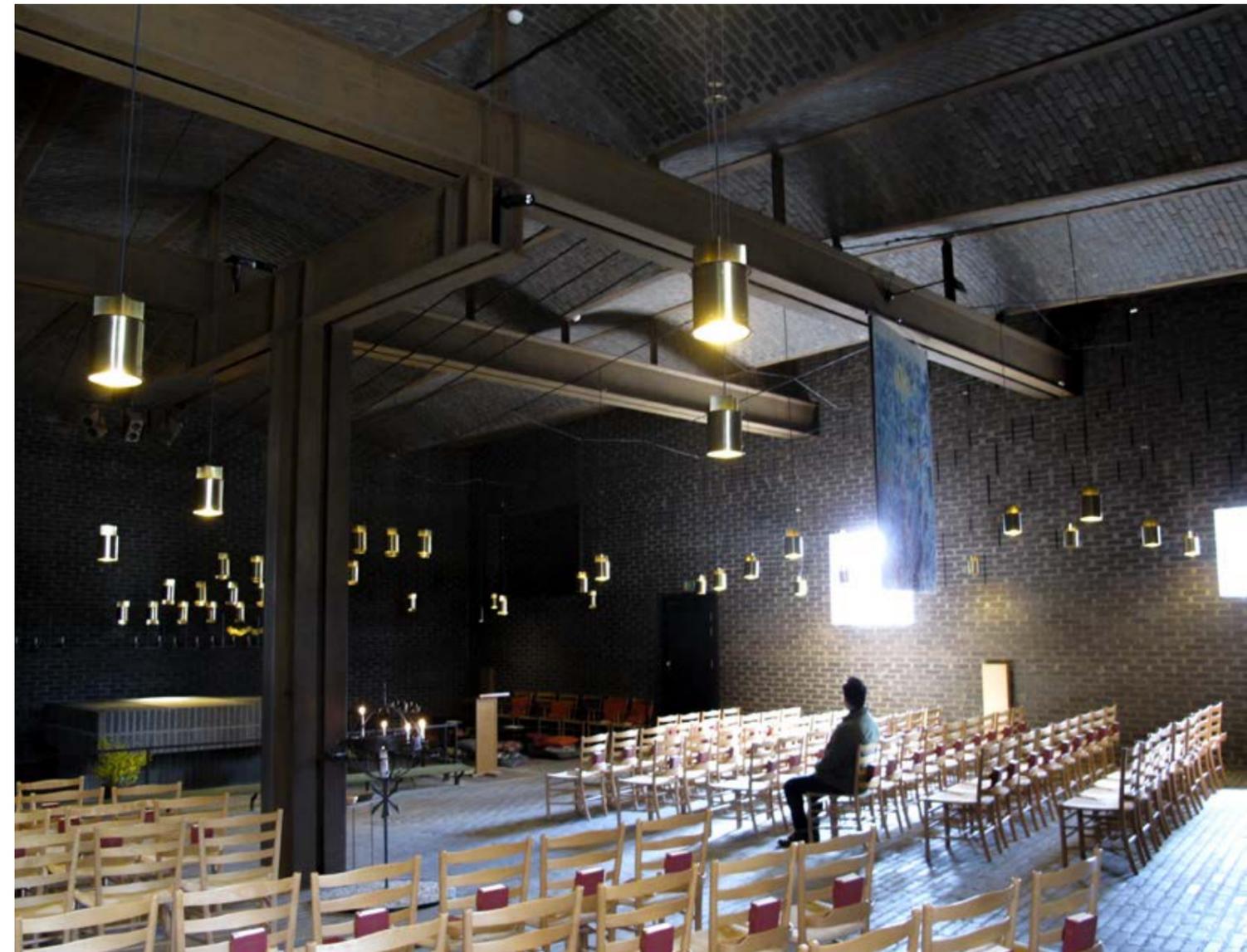
The small entrance door leading us into a tiny side chapel is just the first step of the journey though the built imagined by the architect. Its location and humbleness meant to slow us down, it helps to orient us between ground below and the low Skanian sky above, preparing us for the weight and the presence of the interior.

The room is square and full of darkness - the kind of darkness that is not merely absence of light, but a presence, a matter in its own right. It is filled with lingering shadows, with the safety of a heavy roof above our heads. And though the natural conditions of southern Sweden in many ways differs to those of Japan, the sensation this early spring day reminds us of the temple buildings of Kyoto: a transcendence from the sharp light above through a sequence of thresholds into the slow serenity of the shadows.

Just as Tange's National Gymnasiums and their preceding Japanese temple roofs, the space above our heads has depth. A complex canopy of light and shadow under which the commu-

nity can gather. And yet, it is not a hollow construction in the sense of the Japanese woodwork of the temples or the grids of the gymnasium roofs; it is a surface of bricks, just like the walls and floor in front of us. Apart from two narrow lantern constructions, the roof is a solid, arched surface. But somehow the unity of the material, the quality of faint light, the accumulated shadows multiplying exponentially in the corners give the impression of complex, layered space - a buffer between us and the open skies.

The square layout of the room, reminiscent of the very first informal christian sermons of '*circumstantes*' - of gathering in a circle - rather than the strict orders of the later Basilicas, was Lewerentz addition to the modernisation of Lutheran ceremonies. By getting rid of any hierarchy or rigidity of the practices, the congregation was to be brought closer to each other, and the priest to the followers. Thus the placement of the chairs for the congregation, the brick bench for the choir and the clergy in a more-or-less circle around the steel cross and the brick altar.^{[8][9]}





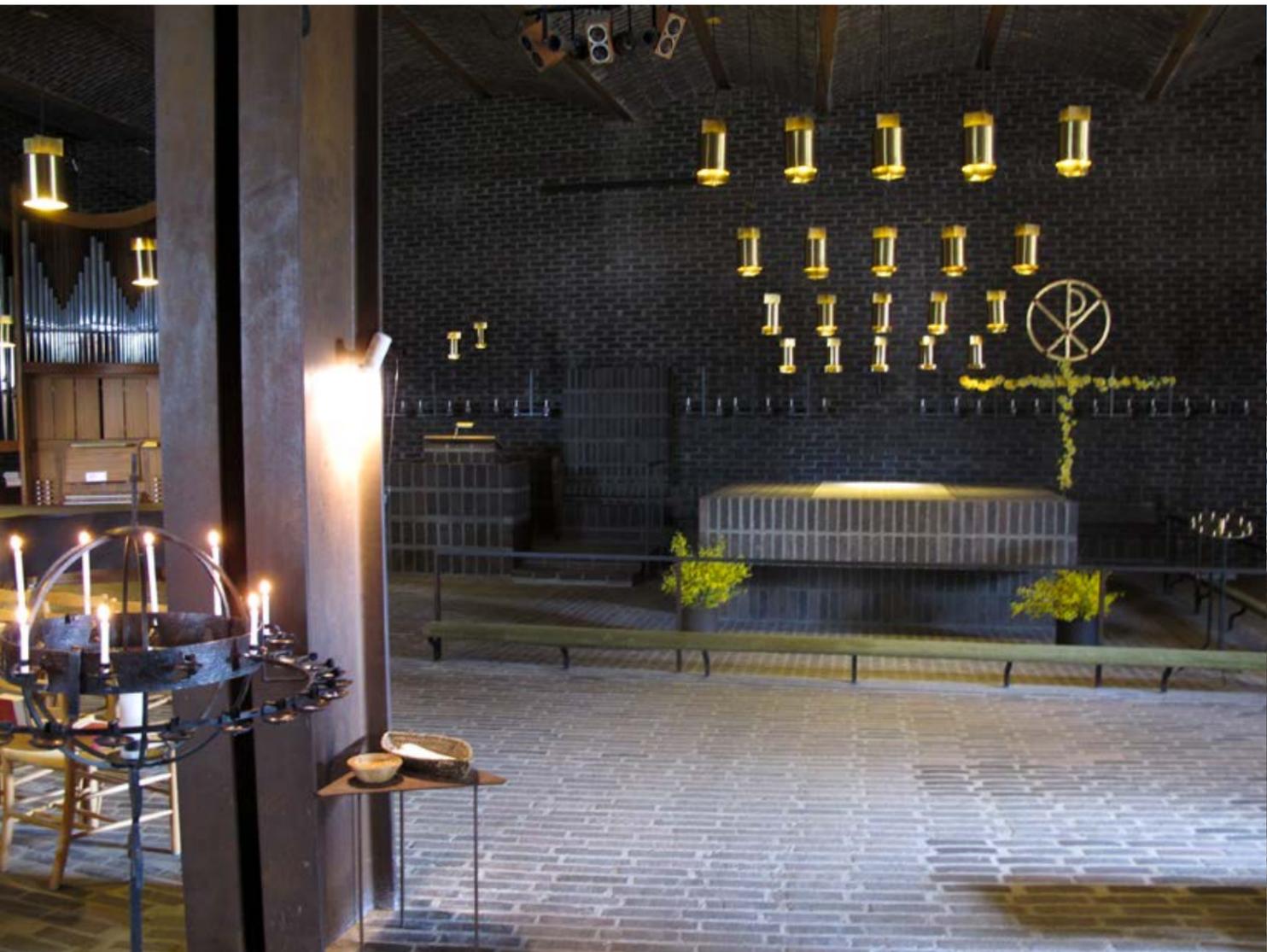
The sparseness in light helping to bring out the full weight, the full materiality of the bricks, the materiality in turn serves to accentuate the cohesion of the space. If Tadao Ando two decades later was to create spaces into which the urban nature was brought, then Lewerentz church *is* nature, the dark red clay bricks and slate-infused mortar manageable chunks of nature itself. Finding strength and togetherness in a group is ancient, building a shelter of burnt clay equally so; the experience of the subtle movements

of light in the shadowy room in turn as old as human existence.

The light is used symbolically in a manner which is only made possible with the relative darkness of the interior. Slits in the roof surface cast a faint ray of light on the floor, guiding the priest from the sacristy to the altar during sermon.^[10] Likewise, the large shell used as a baptismal font is naturally lit. But apart from that, the four frameless windows are

more holes in a ruin, blinding but finite squares of the brightness, than they are sources of light. Their mode of construction, where the fixed glass panes - slightly larger than the window openings - are attached with metal frames and thick black sealant directly on the outside of the wall, leaves them completely invisible from within the worship hall.^[11] With this simple, almost crude invention, Lewerentz simultaneously changed the function - and idea - of a window.

As the square openings are facing south and west, through the seasons and years they let in dramatic rays of light - their angles breaking with the depth of the walls they pierce, catching dust floating mid air and spilling out over the dark brick floor. The movement of the direct light is in this space more a symbol of time passing - of days and nights and seasons changing - than a reliable source of light. Instead it is the myriad of lanterns, golden and seemingly floating in the dark space, that provide



the necessary light above the altar and the informal rows of chairs.

It is worth noting that unlike the windows at St Mark's at Björkhagen, Lewerentz chose to place the panes of glass on the outside of the walls at Klippan, rendering them invisible from within. From the outside however, the glass panes are highly reflec-

tive, animating the strict facades with mirrored images of the surrounding park and the passing clouds. At St Mark's, where the windows are attached to the interior sides of the walls, it is the inside of the church that is instead subject to the reflections in the glass, the mirrored images of the floating golden lights. But from the outside, standing in the surrounding birch wood, the

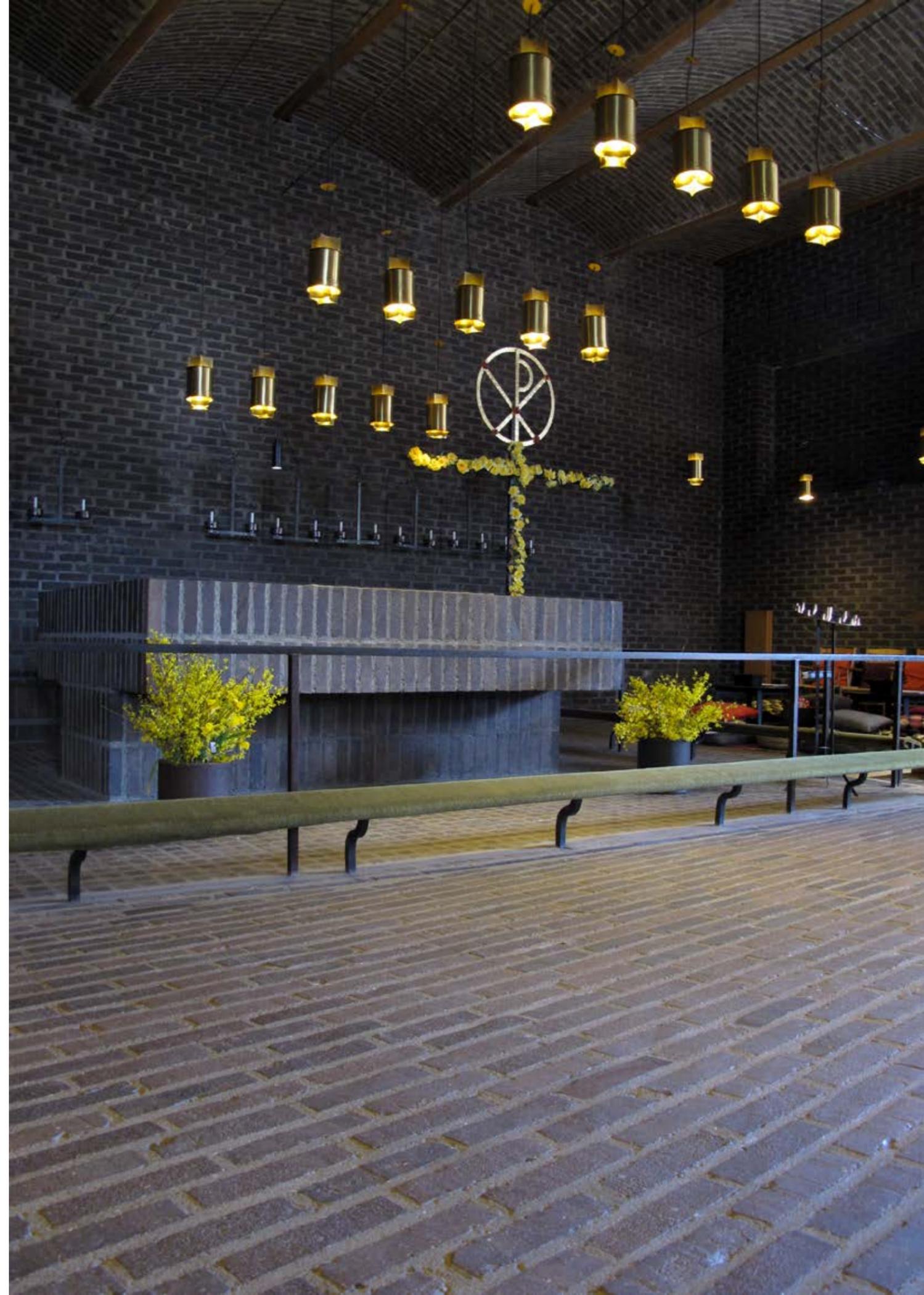
openings in the dark red walls are black, empty holes unraveling the surprising depth of the brick structure amongst the trees.

It is tempting to ponder the reason behind this choice as one stands face-to-face with the severe interior of the church. The result is a dramatic play between light and darkness, the bright

squares of daylight rather prolonging the process of accustoming our eyes to the darkness than leading us on our path through the built. And though he never spoke of his work, the architect once explained that *'subdued light was enriching precisely in the degree to which the nature of the space had to be reached for, emerging only in response to exploration.'*^[12]

It is the lack of light that Lewerentz used to create this uniform, coherent universe, the borders of which are yet for us to discover. It is not a drawn project, nor intellectually calculated with ruler and pen. Rather, it is very much a built project, the specific decisions of construction taken on site as the building evolved. And yet, it is a thought project, the vision of the architect present throughout. His presence is in the walls, the thickness of the mortar, the angles of the roof - as if he had laid every single brick himself. For someone who is not in the business of the built, the feat must be hard to grasp. For architects worldwide, it is a never-ending source of inspiration and awe. It is the equivalent of any other master piece in the field of art; a combination of hard work and the experience and skill that is needed to allow intuition to create freely.

As such, it is both strict and playful, ancient and new - the result of a long and sincere devotion to architecture, and the essence of the act of building.



References

- [1] Frampton, Kenneth, *Tadao Ando - Buildings Projects Writings*, New York: Rizzoli, 1984, 134
- [2] <http://www.archdaily.com/114435/ad-classics-st-mary-cathedral-kenzo-tange>, 2017-06-30
- [3] <http://architectuul.com/architect/kunio-maekawa>, 2017-07-10
- [4] <http://architecturalmoleskine.blogspot.se/2011/10/metabolist-movement.html>, 2017-07-10
- [5] <http://architecturalmoleskine.blogspot.se/2011/10/kenzo-tange-st-marys-cathedral-tokyo.html>, 2017-05-25
- [6] <http://www.arch2o.com/studio-light-tadao-ando-architect-associates/2017-05-18>
- [7] Frampton, 1984, 137
- [8] Ando, Tadao, *Inside Japan*, Japan: TOTO, 2008, 455
- [9] *Ibid.*, 446
- [10] *Ibid.*, 449
- [11] *Ibid.*, 446
- [12] Frampton, 1984, 9
- [13] *Ibid.*, 134
- [14] Caruso, Adam, *Sigurd Lewerentz and a Material Basis for Form*, Amsterdam: OASE Issue 45/46, 1997, 88-95
- [15] Unwin, Simon, *Twenty Buildings Every Architect Should Understand*, Oxon: Routledge, 2010, 181-183
- [16] St John Wilson, Colin, *Sigurd Lewerentz - The Sacred Buildings and the Sacred Sites*, London: Pall Mall, 2013, 11-21
- [17] *Ibid.*, 19
- [18] Flora, Nicola and Giardiello, Paolo, and Postiglione, Gennaro, *Sigurd Lewerentz*, London: Pall Mall, 2013, 336
- [19] Caruso, 1997, 88-95
- [20] Flora and Giardiello and Postiglione, 2013, 335
- [21] *Ibid.*
- [22] Unwin, 2010, 187
- [23] *Ibid.*
- [24] Flora and Giardiello and Postiglione, 2013, 235
- [25] St John Wilson, 2013, 20

Epilogue

We have reached the end of this year of exploration, and I am happy you have joined me all the way through. I would not have made it without you.

From the permeable roofs of the architecture of sky, we take the knowledge that we will always find ourselves looking upwards from below. From the kinship we have felt with matter and hues we assess an ancient alliance to the earth we walk above. In the shadows and their weight we found the borders of our mind connected to the edges of the infinite. And at the exact moment in time and space where darkness and light collide, for a second we thought we had it all figured out.

The exploration continues, however, of this world and of the built, of the human experience of being, and its poetic connections to light.

Recommended Literature and Articles

- The Architecture of Light*, Mary Ann Steane, Oxon:Routledge 2011
The Experience of Architecture, Henry Plummer, London: Thames and Hudson, 2016
- Rethinking Dwelling and Building*, Jonas Holst, ZARCH No.2, 2014,
Thinking with Heidegger: Displacements, Miguel de Beistegui, Bloomington: Indiana University Press, 2003
Malmö Konsthall 1975-2005, Per Qvarnström, Malmö: Malmö Konsthall catalogue No 201, 2005
Malmö Konsthall, Adam Caruso, London: AA Files Issue 41, 2000
Sverre Fehns arkitektur, Anders Wilhelmson, Stockholm: Arkitektur, 1994:6
Encounters - Architectural Essays, Juhani Pallasmaa, Helsinki: Rakennustieto Oy, 2005
Light Organising Architecture - Jorn Utzon Logbook: v. 2, Martin Schwartz, Denmark: Edition Blondal, 2005
Revisiting Utzon's Bagsvaerd Church, Michael Asgaard Andersen, Nordisk Arkitekturforskning 2005:2
- Atmospheres*, Peter Zumthor, Basel:Birkhäuser, 2006
Carlo Scarpa, The Complete Works, Dal Co and Mazzariol, Oxon: Electa/Architectural Press, 1986
Invisible Cities, Italo Calvino, London:Secker & Warburg, 1974
Carlo Scarpa, Robert McCarter, London: Phaidon, 2013
Six Memos for the new Millenium - Lightness, Italo Calvino, London: Vintage Books / Random House, 1988
Barbican: A unique Walled City Within the City, Gail Borthwick, Edinburgh: University of Edinburgh, 2011
Residents., Anton Rodriguez, London: Barbican, 2016
The Barbican - Architecture and Light, Alan Ainsworth, London: Oblique Publishing, 2015
- In Praise of Shadows*, Jun'ichiro Tanizaki, London: Vintage Publishing, 2001
Tadao Ando - Buildings Projects Writings, Kenneth Frampton, New York: Rizzoli, 1984, 131
Märk Världen, Tor Norretranders, Viborg: Bonnierpocket, 1999, 491
- Tadao Ando 3 - Inside Japan*, Tadao Ando, Japan: TOTO, 2008, 455
Sigurd Lewerentz and a Material Basis for Form, Adam Caruso, Amsterdam: OASE Issue 45/46, 1997, 88-95
Twenty Buildings Every Architect Should Understand, Simon Unwin, Oxon: Routledge, 2010, 181-183
Sigurd Lewerentz, Flora / Giardiello / Postiglione, London: Pall Mall, 2013, 336