DAYLIGHT & ARCHITECTURE MAGAZINE BY
VELUX GROUP SUMMER 2014 ISSUE 21 10 EURO
THE FUTURE IS LIGHT

DA

IN A VERY REAL WAY, WE CANNOT BE WITHOUT WHATEVER IT IS THAT THE SUN GIVES US. HOWEVER, IT IS ALSO IMPORTANT TO CONSIDER WHAT IT IS THAT WE [illegible] THE SUN IN RETURN.

CRAIG DYKERS

LIGHT IS OF ALL MA

R THAN FOR A SPECIFIC CAREER.

MATERIAL THAT

TECTURE.

RELATED TO LIGHT, I CAN ONLY SEE OPTIMISM – BECAUSE IT IS A FREE MATERIAL AND IT IS THERE TO BE USED.

PER OLAF FJELD

OUR DREAM IS NOT ONLY TO DESIGN BUILDINGS BUT TO IMPROVE PEOPLE'S LIVES.

KENGO KUMA

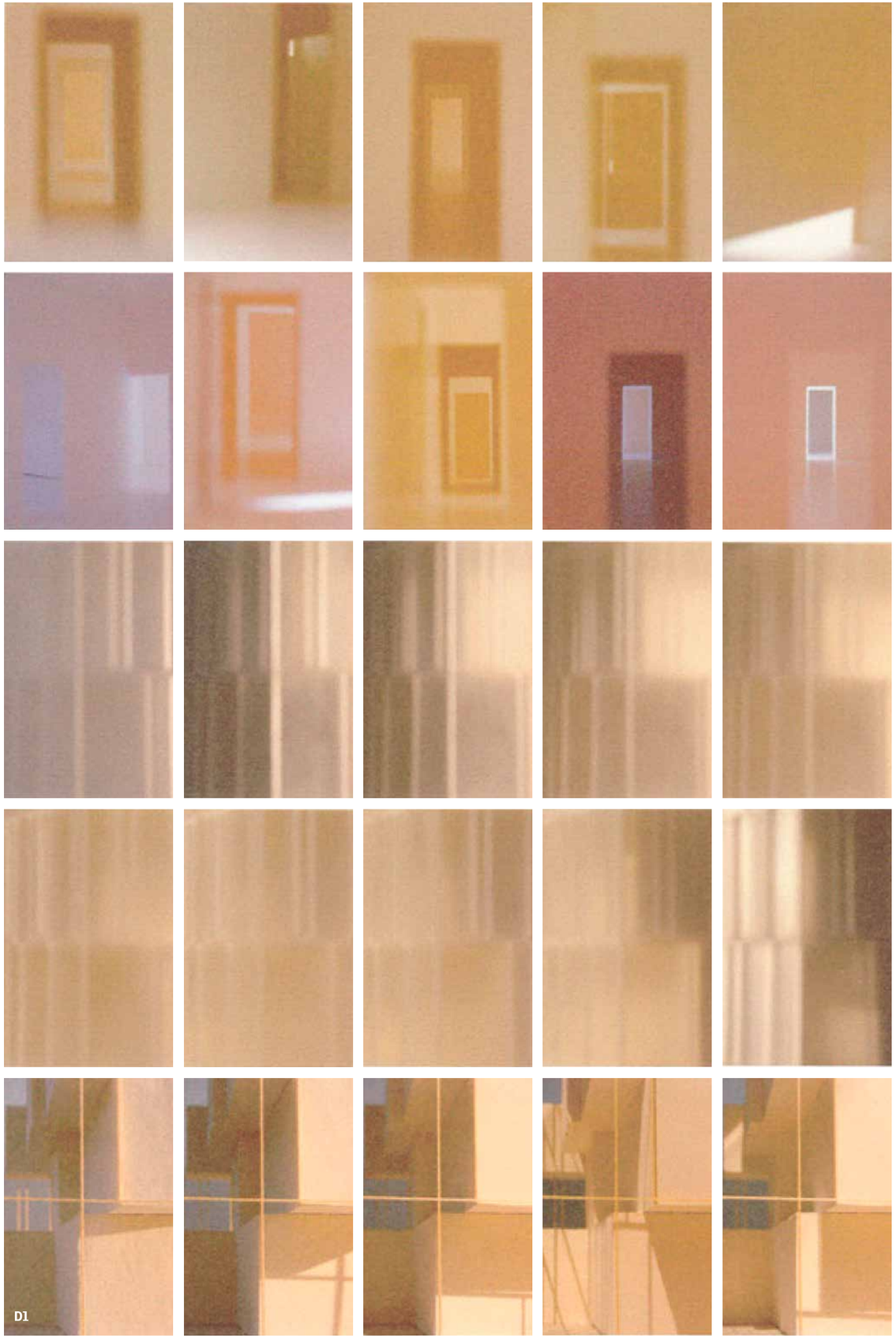
BO LI, GE MEN

WHEN YOU DO A COMPETITION LIKE THIS, YOU DO SOMETHING THAT HAS THE POTENTIAL TO SHIFT YOUR WORLD.

PETER STUCHBURY

ETERNAL THOUGH DAYLIGHT MAY BE IN PHYSICAL RESPECTS, IT IS RIPE FOR REDEFINITION AS REGARDS ITS CULTURAL SIGNIFICANCE. THE LIGHT OF TOMORROW WILL BE SHED UPON A NEW ARCHITECTURE.

OLE BOUMAN



FURTHER INFORMATION ON PP. 13–15

D1

VELUX EDITORIAL

THE FUTURE IS LIGHT

"Eternal though daylight may be in physical respects, it is ripe for redefinition as regards its cultural significance. The light of tomorrow will be shed upon a new architecture." wrote Ole Bouman ten years ago as one of the first jurors of the International VELUX Award for Students of Architecture. From modest beginnings in 2004, the award has grown into one of the most important awards of its kind worldwide, with the participation so far of almost 4,000 student teams from more than 60 countries.

From the start, the theme of the International VELUX Award has been 'Light of Tomorrow'. We are convinced that tomorrow's light will be of natural origin, for nothing can match daylight in its variability, dynamics and beneficial effect on human health and well-being. Over the years, the participants in the award have developed thousands of ideas of how this natural gift can be used in buildings and dense urban spaces, as well as in the remotest rural areas.

Who – if not future generations of architects – could create the new architecture that Ole Bouman calls for? And where, if not in the architecture schools of the world, should aspiring architects learn the skills to redefine the state-of-the-art in architecture, to create healthier, more people-friendly and more sustainable buildings?

This issue of Daylight/Architecture celebrates daylight – and the thousands of bright reflections and ideas from students from all over the world – and embarks on a conversation about the future of architectural education. We start this dialogue by looking back at the ten years of the International VELUX Award, recapitulating some of the discussions among jurors and the issues that have been raised by the students in their submissions. This is accompanied by images from some of the award-winning and honourably mentioned projects from the last ten years. The second part of the magazine discusses the future of daylight in architecture and how architectural education should develop to support its use. We have spoken to all previous winners of the award, as well as representatives from the schools of architecture where the winners studied, and asked them about the changes and challenges that architectural education is facing. They all agreed on one point: although architects today face the need to acquire all sorts of specialist knowledge and technical skills, there seem to be a number of enduring virtues that make a good architect. These include the ability to think holistically, the capacity for creative problem-solving and for teamwork, as well as the willingness to take on responsibility for our society and the environment. Furthermore, as the future – including the future of architectural education – is intrinsically uncertain, students should be given freedom of thought and freedom for experiments, and be taught to ask the right questions before trying to find answers.

In the months and years to come, we would like to expand the discussion on architectural education with all schools and teachers, with the international organisations involved in architectural education, and with all of our readers.

The dialogue on daylight and its significance in architecture will also continue this year with the sixth edition of the International VELUX Award. In June, an international jury will select the winners and honourable mentions of the 2014 award; their names will be announced and award presentations made in October. Look out for the results on iva.velux.com – and be inspired to participate in a future edition of the award if you are yourself a student or a teacher of architecture.

Enjoy the read!
The VELUX Group

SUMMER 2014

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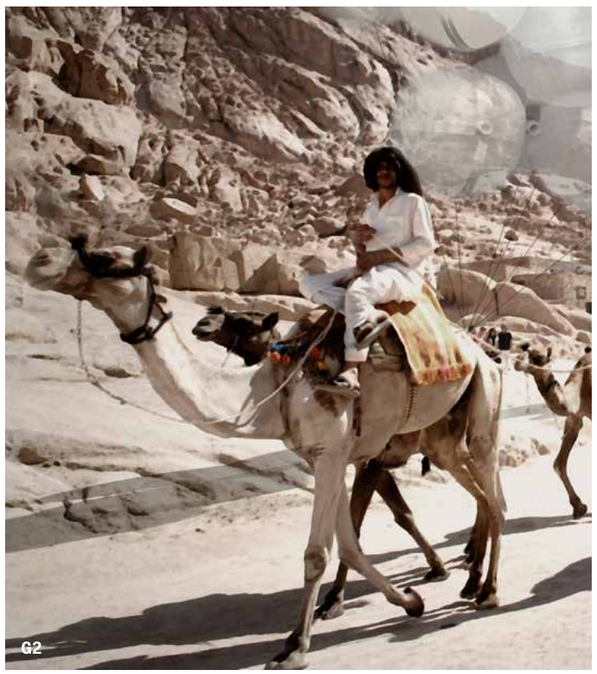
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JURORS AND PARTICIPANTS

The growth of the International VELUX Award in figures and graphics: from 2004 to 2014, these pages present a list of all participants and jurors in the ten-year history of the International VELUX Award.

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4000 BRIGHT IDEAS

With almost 4,000 submissions so far, the International VELUX Award represents an almost inexhaustible collection of ideas on daylight and its use in architecture. This article presents a collage of some of the most interesting projects and recurring themes that the students have dealt with.

23

TEN YEARS OF DAYLIGHT

What does the history of the International VELUX Award tell us about the significance of daylight in architectural education? And what trends in architectural education are reflected in the submissions? At its tenth anniversary, it is time to trace the development of the Award so far, and recapitulate the most interesting discussions among the jurors.

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LEARNING FOR THE UNKNOWN

How to prepare a new generation of architects for a future that is uncertain? This article discusses some of the premises: give students freedom of thought and experiment, teach them to take on responsibility for society in general, and provide architectural education with a value base.

35

A WORLD OF OPPORTUNITIES

Architectural education has to do more than prepare young professionals for the labour market. But what precisely are the requirements that architecture schools must live up to? The former winners of the International VELUX Award, as well as their professors and the heads of school where they studied, discuss this question in their statements.

72

THE DEBATE CONTINUES

At the end of this issue of Daylight/Architecture, we call for professionals world-wide to continue the debate on daylight and architectural education on the Internet and on Twitter. To carry the issue beyond the pages of this magazine, we are addressing all of our readers with a letter.


A1


A4


C3

THE INTERNATIONAL VELUX AWARD

JURORS

2004

Glenn Murcutt
Architect (Australia)

Craig Dykers
Architect, Snøhetta (Norway)

John Pawson
Architect (United Kingdom)

Ole Bouman
Architect, at the time editor-in-chief of Archis (The Netherlands)

James Horan
Architect, at the time president of EAAE (Ireland)

Ahmet Gülgönen
Architect, appointed by UIA (France)

Michael Pack
At this time General Manager, VELUX Germany (Germany)

2006

Kengo Kuma
Architect (Japan)

Róisín Heneghan
Architect, heneghan peng architects (Ireland)

Omar Rabie
at the time MIT student (Egypt)

Douglas Steidl
Architect, at the time AIA President, appointed by UIA (USA)

Per Olaf Fjeld
Architect, at the time president of EAAE (Norway)

Massimo Buccilli
General Manager, VELUX Italia (Italy)

2008

Hani Rashid
Architect, Asymptote Architecture (USA)

Enrique Browne
Architect, Enrique Browne & Associates (Chile)

Eva Jiricna
Architect, Eva Jiricna Architects (United Kingdom)

Huat Lim
Architect, ZlgDesign (Malaysia)

Francis Nordemann
Architect, at the time president of EAAE (France)

Michel Langrand
General Manager, VELUX France (France)

2010

Nathalie de Vries
Architect, MVRDV (The Netherlands)

Momoyo Kaijima
Architect, Atelier Bow-Wow (Japan)

Will Bruder
Architect, Will Bruder + Partners (USA)

Magda Mostafa
Architect, American University in Cairo, appointed by UIA (Egypt)

Stefano Musso
Architect, at the time president of EAAE (Italy)

Jesper Salskov Jensen
General Manager, VELUX Denmark (Denmark)

2012

Álvaro Siza Vieira
Architect (Portugal)

Brigitte Shim
Architect, Shim-Sutcliffe Architects (Canada)

Peter Stutchbury
Architect, Peter Stutchbury Architecture (Australia)

Juan Miró
Architect, Miró Rivera Architects (USA)

Per Arnold Andersen
Architect, VELUX Group (Denmark)

2014

Craig Dykers
Architect, Snøhetta (USA)

Róisín Heneghan
Architect, heneghan peng architects (Ireland)

Magda Mostafa
Architect, American University in Cairo (Egypt)

Catherine Slessor
Editor, Architectural Review (United Kingdom)

Per Arnold Andersen
Architect, VELUX Group (Denmark)

PARTICIPANTS

2004: 258 SUBMISSIONS, 27 COUNTRIES

2006: 557 SUBMISSIONS, 53 COUNTRIES

2008: 686 SUBMISSIONS, 46 COUNTRIES

2010: 673 SUBMISSIONS, 55 COUNTRIES

2012: 983 SUBMISSIONS, 59 COUNTRIES

2014: 802 SUBMISSIONS, 54 COUNTRIES

FURTHER INFORMATION ON P. 13–15

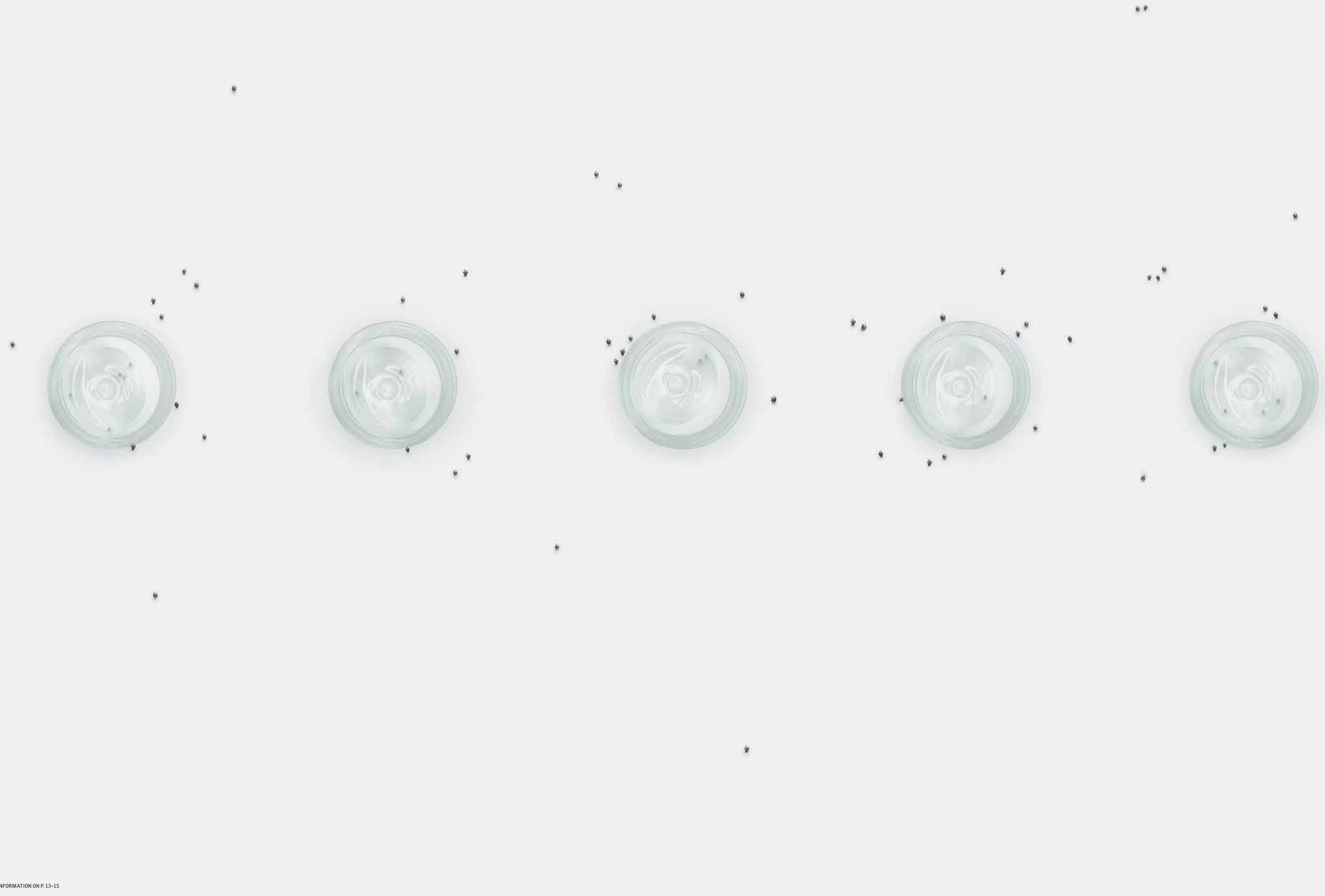
4000 BRIGHT IDEAS

In almost 4,000 competition entries over the past ten years, the participants in the International VELUX Award have developed "more ideas than we can imagine" (Omar Rabie) about the use of daylight in architecture. While some students submitted rather straightforward building designs, others strove to achieve the impossible in their submissions, and bring daylight where it had never been before.

Within this vast collection of ideas, some themes proved to be particularly inspiring to the participants, prompting them to be considered in the projects more often than others. The following pages display some of these themes, illustrated by selected prize-winning projects and Honourable Mentions from the International VELUX Award.

A Daylight underground
B Daylight and materials
C Adaptive building envelopes
D Daylight and perception
E Domestic daylight
F Urban daylight
G Storing daylight.

Selected themes (further information on p. 13–15)



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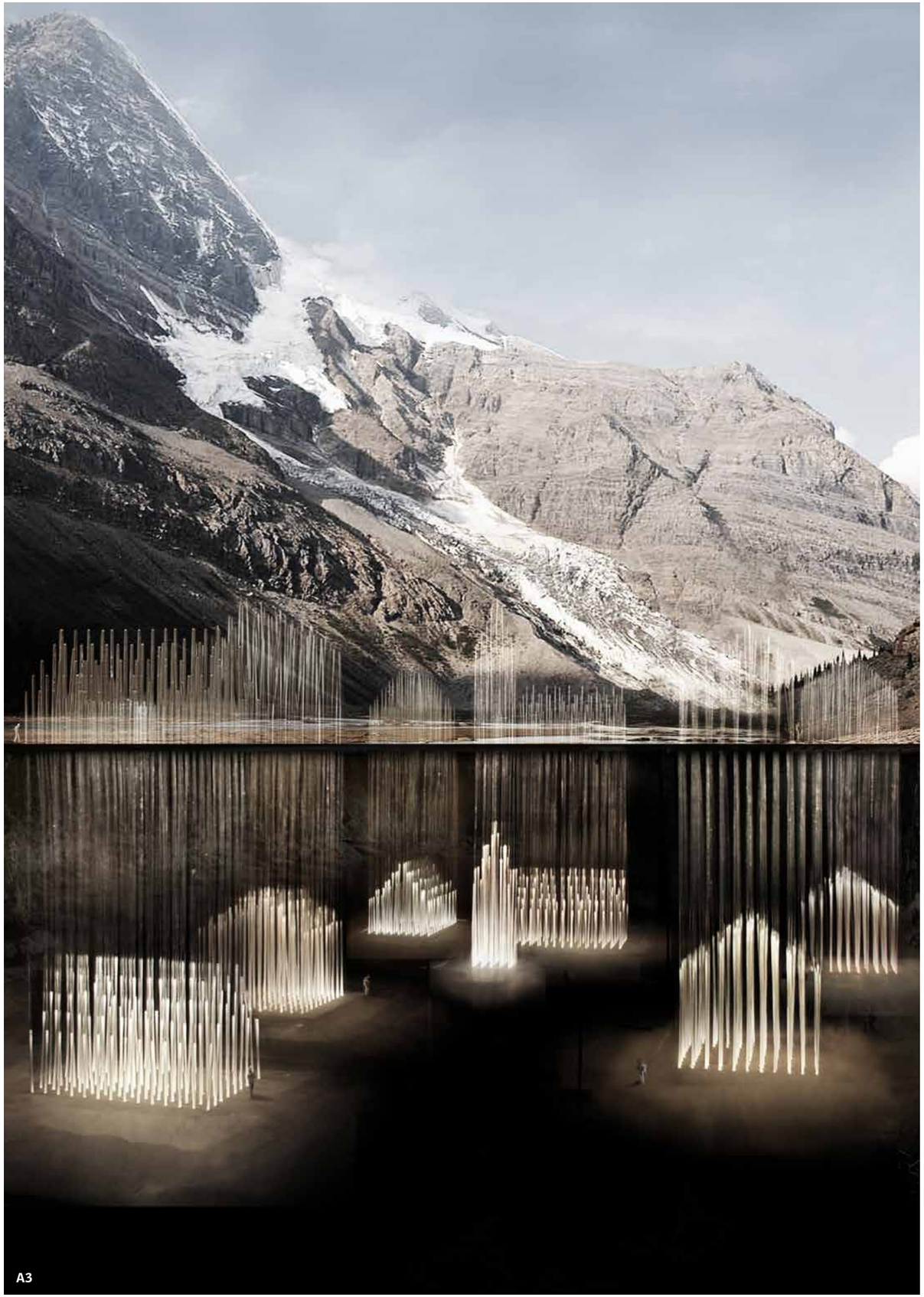

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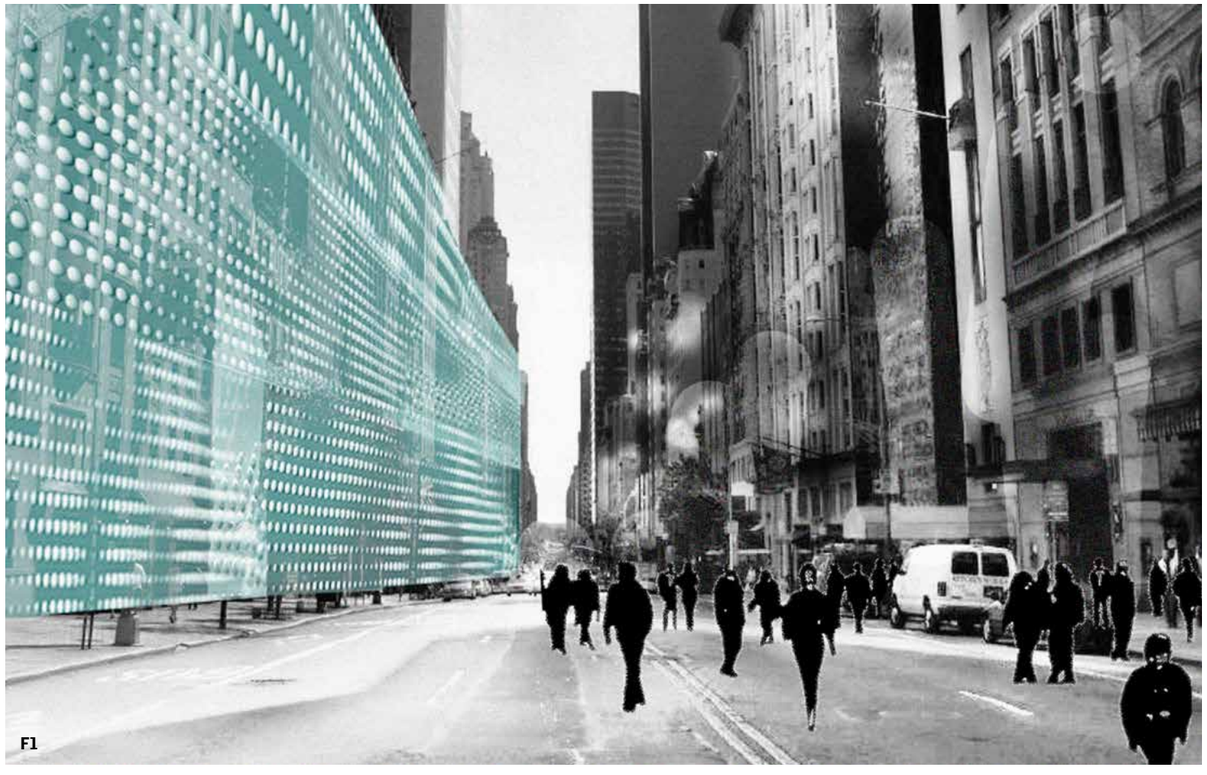

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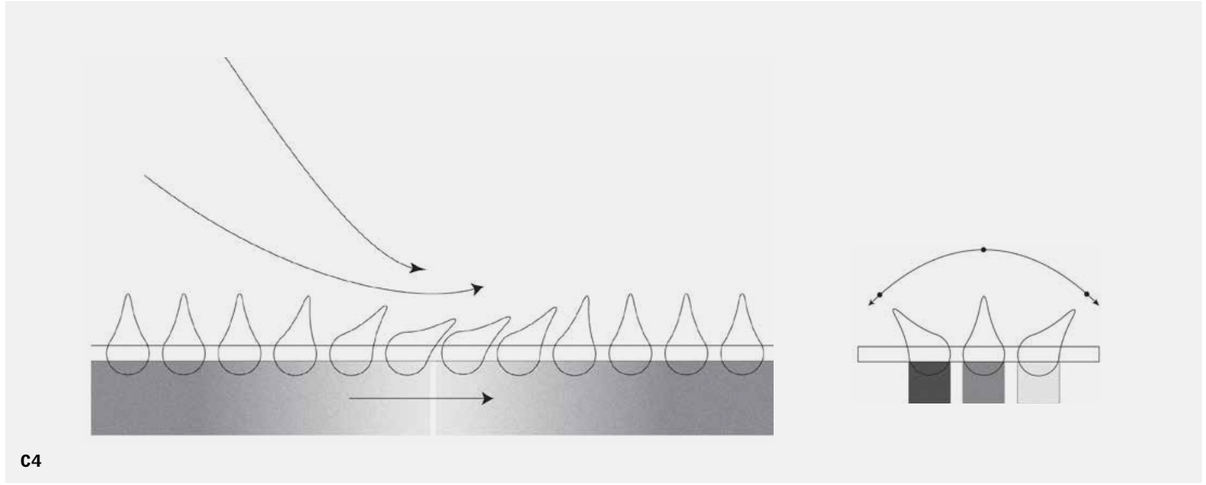

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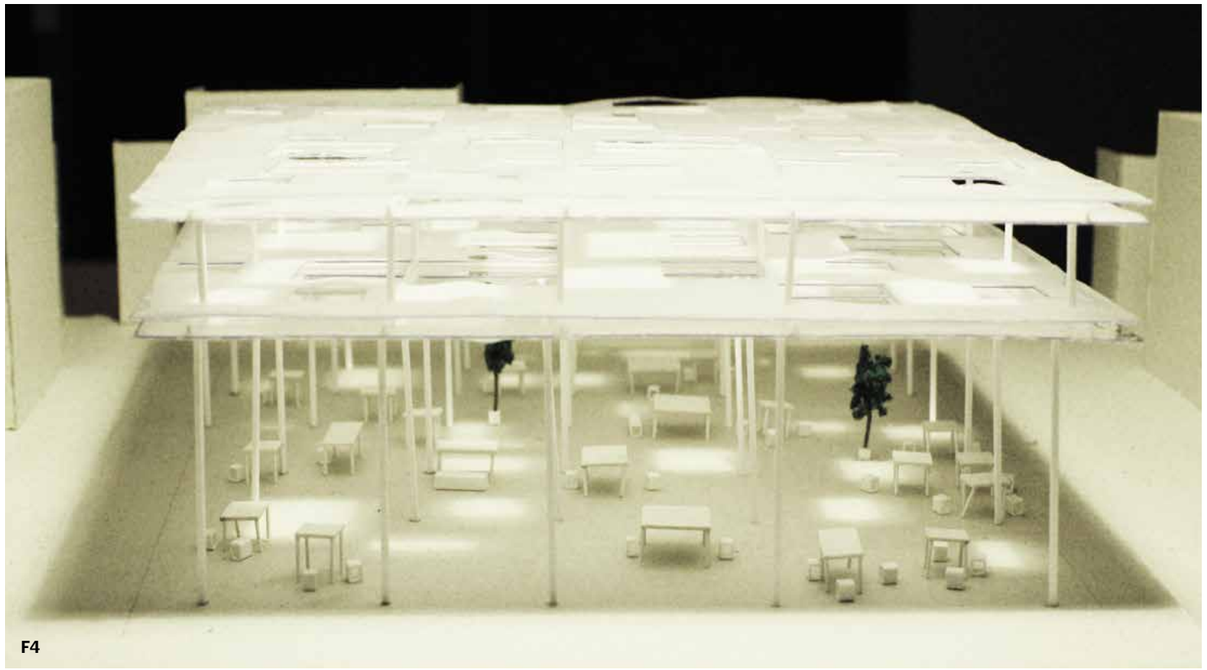

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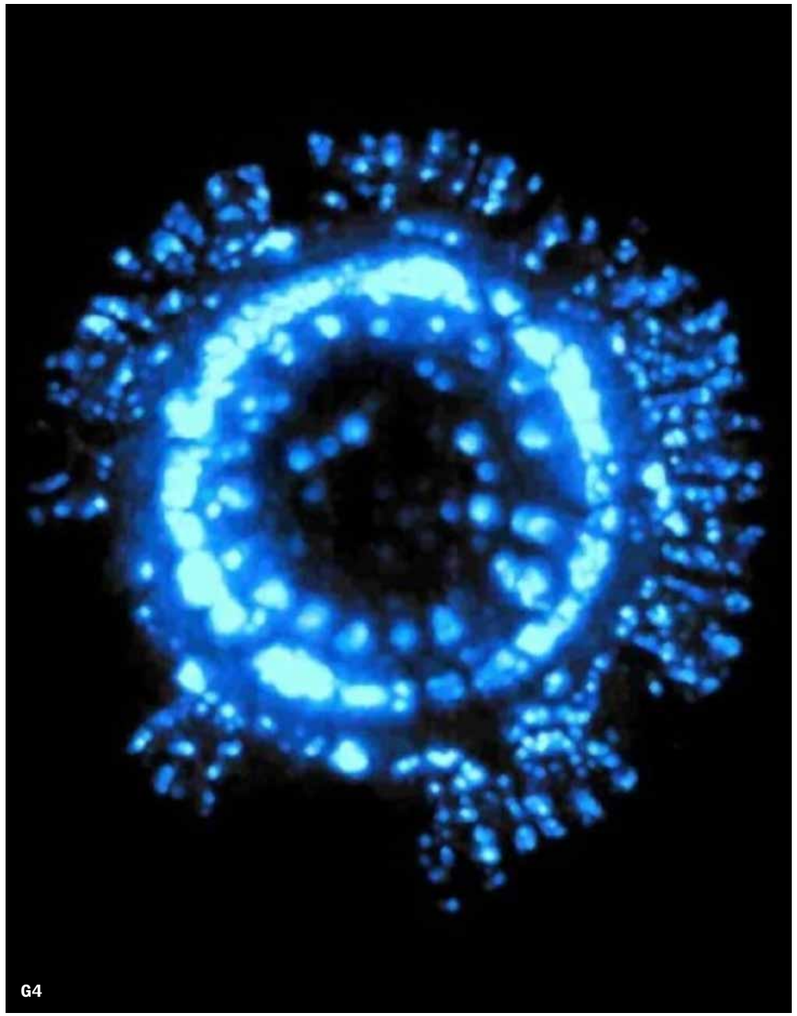


G4

4000 BRIGHT IDEAS

SELECTED PROJECTS
2004–2012

A DAYLIGHT UNDERGROUND

A1
Embodied Ephemerality: Light-Form Architecture
Reilly Hogan, Cornell University (USA): 1st Prize 2008

This project converts an otherwise dull commuter space – the PATH railway station near Ground Zero in New York – into a visually stimulating and constantly changing environment. Daylight from above is refracted into the underground space by translucent glass surfaces that dematerialize the boundaries of the space and wrap the interior with embodied light.

A2
Beauty in the UnDaylightable
Yan Shi & Chung-Kai Yang, Delft University of Technology (The Netherlands): Honourable Mention 2010

The 'UnDaylightable', as the two Delft-based students see it, consists of the windowless basements of typical Dutch canal houses. The scheme suggests to install 'energy farms' in the Dutch countryside that capture sunlight by means of solar concentrators and feed it into optical fibres, which transmit the daylight to wherever it may be needed. Due to its flexibility, the system can create a multitude of light ambiences inside the underground spaces, while still keeping them connected to the natural rhythms of light and darkness.

A3
Resonance, memory
Bo Li, Ge Men, Eidgenössische Technische Hochschule Zürich (Switzerland): 1st Prize 2012

The idea of this work is based on a hypothetical mudflow in the Swiss Alps that has buried a small village. To re-create the memory of this settlement, the two students propose to introduce over 700 acrylic rods into the earth. Above ground, their shape recalls typical houses from the Swiss rural area. The same shape appears once again in underground voids, as an image created by daylight that the PMMA rods introduce from above.

A4
Light mineral
Hyung-Jin Choi, Jong-Won Lee, Seung Kim, Do-Yub Kim & Doo-San Paek, Korea University (Republic of Korea): Honourable Mention 2006

"The more darkness gets darker, the more the vitality of light becomes stronger", write the four Korean students about their project. 'Light mineral' is a proposal for bringing daylight into an abandoned mine on a hillside. Vertical light shafts are introduced into the ground. Their side walls, which consist of the different minerals to be found on site, reflect the daylight coming from above and colour it in different hues.

A5
Light as the main element determining the spatial quality
Sung Hyun Jun, Korea University (Republic of Korea): Honourable Mention 2006

In this proposal for an underground exhibition space beneath Maronnier Park in Seoul, Sung Hyun Jun creates a veritable 'indoor landscape' made of daylight that is transmitted underground via optical fibres. These can be flexibly rearranged, either forming a continuous luminous field, or tied together to form suspended 'light columns' that structure the space.

B DAYLIGHT AND MATERIALS

B1
Light as Matter
Claes Cho Heske Ekornås, Oslo School of Architecture (Norway): 1st Prize 2004

The first-ever winner of an International VELUX Award, Claes Cho Heske Ekornås designed a museum for the Korean video artist Nam June Paik, embedded in a hillside. This 'underground landscape' is delimited by undulating, translucent hollow walls made of polycarbonate, glassfibre textile and rubber, which capture the light coming in from above and scatter it into the adjacent spaces.

B2
Cultivated shadows
Petia Ratzov & Carl Hall-Karlstrom, University of Lund (Sweden): Honourable Mention 2006

Half shading device and half urban sculpture, 'Cultivated shadows' consists of a newly developed Germanium/Selenium (Ge/Se) glass that becomes soft when exposed to specific kinds of light, and turns back to solid under the absence of light. Each of the glass fins is equipped with a rubber suspension along the sides to hold it in an upright position.

B3
Light Has a Body
Dean MacGregor, Universidade Lusíada de Lisboa (Portugal): 3rd Prize 2008

In his project for an underground space underneath a city square, Dean MacGregor uses natural light transmitted by huge water tanks for illumination. He said, "I wanted to show that light can be seen as a physical dimension. The water [...] stops the light for an instant, refracts it to the interior of the space – and creates a body of light."

B4
Redefinition of the skylight
Bin Jiang, Haiting Ye, Peixin Xu, Yiqin Zhu & Tenghan Zhang, Tongji Zhejiang College (China): Honourable Mention 2012

Inspired by traditional Chinese paper-cuts, the four students designed a skylight that simultaneously acts as a rooftop terrace, filters daylight through a layer of sand. The 'cutting', in this case, is done by environmental forces such as wind and rain, or by people sitting or walking on the sand.

B5
Instant Impressionism
Wang Fei & Zheng Kaijing, Tsinghua University (China): Honourable Mention 2010

Inspired by Claude Monet's paintings of Rouen Cathedral, Wang Fei and Zheng Kaijing conceived this reflective mural for a light rail station in Beijing. The photographs were taken from a physical model on site at the actual station in order to provide a realistic impression of what the intervention would look like.

C ADAPTIVE BUILDING ENVELOPES

C1
Desert Light
Benjamin Saragoussi & Gregory Bismuth, École Nationale Supérieure d'Architecture de Paris-Belleville (France): Honourable Mention 2006

This underground museum located in the Israeli Negev Desert is entirely lit through its roof. Daylight provision is controlled by means of textile awnings attached to metal strips. The latter consist of a nickel/titanium shape-memory alloy that changes shape when exposed to light, closing the shading elements when the sun rises and opening them again when it gets dark.

C2
Illuminated Music
Marie Löwenhertz, University of Lund (Sweden): Honourable Mention 2008

Marie Löwenhertz designed a music space equipped with adjustable rooflights that open and close with the rhythm of the music. The openings – reflecting aluminium on one side and totally black on the other – are conducted like stage lighting. They also help to adjust the thermal behaviour of the building, with the aluminium turned outwards to reflect the sun's heat in summer, and the black side being used to absorb it in winter.

C3
Stroking the sunshine
Qi Xu & Tao Cao, Tongji University (China): 3rd Prize 2012

This façade-integrated 'bubble curtain' invites users to physically interact with the building envelope in order to control indoor daylight levels. By 'stroking' the curtain, the people in the room can squeeze the air out of the bubbles, thus making them smaller and increasing the incidence of daylight. When left untouched for a while, the elevated air pressure inside the double-layer curtain will slowly let the air flow back into the bubbles and make the façade turn opaque again.

C4
Light & wind
Pit Herold, Mads Johnsen, Kasper Old Jensen & Peter Drechsler Poulsen, Arkitektskolen i Aarhus (Denmark): Honourable Mention 2012

Droplet-shaped, hollow glass vessels are embedded in a perforated façade with their thin ends pointed outwards. When air movements hit the façade, the effect will resemble a wheatfield moving in the wind: the droplets start to tilt and turn in their sockets. Due to a gradient in the glass, this rotation also affects the amount of daylight entering the room.

C5
Evolutive glazing – shining light
Michael Lequeu, Martin Vandevoorde & Florent Schoennagel, Université Catholique de Louvain U.C.L. (Belgium): Honourable Mention 2012

This device is made of two glass sheets with a mixture of alcohol and water in-between. Floating in this liquid are pieces of beeswax in various colours, which start to expand and move upwards as the façade heats up in sunlight. While this movement reminds building users of the thermal conditions outside, the irregular structure of the wax flakes 'materialize light' in a similar way as the stained glass windows in churches.

C6
Water lily, the symphony of architecture and sunshine
Bo Zeng, Yiming Cai & Jingyi Zhao, Tianjin University (China): Honourable Mention 2012

Time-lapse movies reveal that water lilies open and close their flowers depending on the time of day, and on the incidence of daylight. This design for a shading device seeks to achieve a similar effect: it opens and provides maximum shade when sunlight hits the façade orthogonally. When the light comes from an oblique angle, segments can be folded outward to provide shade or direct light into the building as desired.

D DAYLIGHT AND PERCEPTION

D1
A museum of photography
Louise Grønlund, School of Architecture at the Danish Academy of Fine Arts (Denmark): 1st Prize 2006

"To design a museum for photography is to create the optimal conditions for seeing", writes Louise Grønlund about her project: "to see not only the photography, but also to make the spectator aware of that which he sees and the conditions within which he is seeing." A layered façade made of translucent and transparent glass allows light into the 40 exhibition spaces, which all have different shapes and sizes of openings to create a variety of 'moods of light' inside them.

D2
Reading place in the forest
Gonzalo Pardo, Escuela Technica Superior de Arquitectura de Madrid (Spain): 2nd Prize 2006

Like a forest, this underground reading space allows those inside it to hide or expose themselves, and to see or not to see the others that are present. There is no furniture inside this half-buried library – just columns, as well as ramps and steps that the users can sit on.

D3
Light as a tool to break structure
Anna Zagorec & Maciej Kozlowski, Politechnika Krakowska (Poland): 3rd Prize 2012

A corridor is flanked by an array of vertical, three-dimensionally folded partition walls with narrow slits of light in-between. Seen from inside the building, this sequence of wall modules forms an ever-changing projection screen, the appearance of which is determined by the moving shadows of the passers-by behind the wall.

E DOMESTIC DAYLIGHT

E1
Interactive natural light source
Ovidiu Mihutescu, Andrei Lazar, Radu Dorgo & Adrian Mihai, Universitatea Politehnica din Timisoara (Romania): Honourable Mention 2012

To bring daylight into the windowless staircases of former Socialist housing blocks, the four Romanian students developed a low-tech 'light tube' made from recycled plastic bottles. Sunlight is introduced into these devices by a similarly low-cost, rooftop-mounted tracking mirror made of aluminium-coated plastic that tracks the path of the sun.

E2
The 'Hole' Issue
Hrvoje Zuparic, Dean Niskota & Ivan Starcevic, University of Zagreb (Croatia): 2nd Prize 2004

What if the distribution of windows in a house was no longer determined by the architect, but if the residents themselves could choose where they would like to have daylight and views? Inspired by this question, the team from Zagreb conceived an archetypal house with an envelope made entirely of electrochromic glass, in which the position and size of the window openings remains forever changeable.

E3
Lightspace between gaps
Joe Wu, Delft University of Technology (The Netherlands): 3rd Prize 2010

"Windows with no view and facing walls are not rare in Hong Kong", says Joe Wu about the city where he was raised. To improve the situation of people living along the narrow streets of the Chinese metropolis, he designed a system of reflective, three-dimensional façade claddings that capture sunlight and reflect it into the rooms of the opposite buildings in an ever-changing pattern of light and shadows.

E4
Window shutters
Ieva Maknickaite, Antanas Lizdenis & Laurynas Vizbaras, Vilnius Gediminas Technical University (Lithuania): Honourable Mention 2010

In their project, the three Lithuanian students reflect on simple shutter techniques, which have been used by our ancestors for generations. According to their idea, new generations of shading elements could either be thermally insulated, or equipped with PV cells and solar thermal collectors on the outside, or broken into segments that can be individually adjusted to cope with varying sun angles and to fine-tune the amount of light entering the rooms.

E5
Section of light
Berte Daan, Eidgenössische Technische Hochschule Zürich (Switzerland): Honourable Mention 2010

"One of the problems with urban densification is the lack of light penetration inside houses", Berte Daan says. To overcome this problem, she reconfigured the section of a multi-storey residential building so that the floor plates are no longer level, but bent in an U-shape with the apartments literally 'stepping up' towards the sun at either end, near the façades. Computer simulations showed that this approach does indeed increase the daylight penetration into the rooms.

F URBAN DAYLIGHT

F1
Repairing Interface Light Festival
Ruan Hao & Xiong Xing; Tsinghua University (China): 2nd Prize 2008

In the narrow street canyons of densely built cities, many spaces are literally 'left in the dark' for most of the day. In their proposal for a one-day 'sunlight festival', Ruan Hao and Xiong Xing suggest to remediate this situation by applying reflective surfaces to the blank exterior walls of buildings. In the long run, what starts as a temporary intervention could also become a permanent installation to enlighten people's lives.

F2
Light invisible bridges
Anastasia Karandinou, University of Edinburgh (United Kingdom): 3rd Prize 2006

With 'Light invisible bridges', Anastasia Karandinou seeks to reconnect the otherwise separated riverbanks along River Suzhou in Shanghai. Her proposal consists of three elements: an open-air cinema (with the film being projected across the river), an underground cinema as well as 'phoneboxes' inserted into the riverside walls that allow users to view the city without being viewed – and vice versa.

F3
Constellation of light fields
Park Young-Gook, Kim Dae Hyun, Choi Jin Kyu & Kim Won Ill, Hanyan University, Seoul (Republic of Korea): 1st Prize 2010

The team from Hanyang University designed an immaterial roof over an outdoor stage in the Marronnier Park in Seoul. Consisting of 'Moebius strips' of fabric that can be bent and twisted, this roof lets every type of light flow to the area below. This variety of daylighting situations corresponds to the wide variety of activities happening beneath the roof. The students explain: "Light is the immaterial architectural element that humans react directly to through the senses. By eliminating the material elements, light can create diversity within a given space."

F4
Condensation of Variational Sunlight Influences
Ma Xin, Wang Rui and Yang Meng, Tianjin University (China): 2nd Prize 2010

This project considers the interaction between sunlight and people's behaviour in urban life. It suggests the reorganization of an open-air market in Kashgar, Northwest China, by introducing a double-layered roof. Each of the layers has a number of square openings that produce a dramatic, ever-mobile interchange between illuminated spots and shadows.

F5
Fleeting perpetuality – Fluxional light under urban scaffolds
Sheng Xiaofei, Fang Erqing, Kang Xiaopei & Yan Wenlong, Tongji University (China): Honourable Mention 2010

With 'Fleeting Perpetuality', the three students from Shanghai propose to light up a type of often-overlooked public spaces within cities – sidewalks or streets that are temporarily built over by scaffolding. For their intervention, the students use a bamboo structure, nets and membranes to create a 'stream 'of light. When the scaffolding is removed, ‚Fluxional light' leaves the site as well and will flow to the next place somewhere in the same city.

F6
Light drama
Dexiao Zeng, Zhao Gao & TianChi Chen, Hunan University (China): Honourable Mention 2012

Folded paper lanterns are a part of Chinese heritage. Here, an oversize 'lantern' serves to introduce daylight into the narrow alleyways of Chinese cities from above, rendering these interstitial spaces useable again for people's everyday activities. The upper part can be bent to follow the track of the sun, and to control the brightness of the incident light.

F7
Atmosphere evolutive surface
Manu Simon, Maïté Oldenhove, Simon Verstraete & Laura Schmitt, Université Catholique de Louvain U.C.L. (Belgium): Honourable Mention 2012

To enliven the often dull, paved surfaces of urban spaces, the four Belgian students designed a three-dimensional system of large (100 × 100 cm) paving stones made of slightly porous concrete, on which rainwater can accumulate in rectangular puddles and reflect the light from the sky. As the surface slowly dries, the puddles gradually become smaller and eventually vanish again.

G STORING DAYLIGHT

G1
Buoyant Light
Claire Lubell & Virginia Fernandez, University of Waterloo(Canada): Honourable Mention 2010

'Buoyant Light' harnesses light in a context where the sun does not always rise and set. The location of the project is Igloolik, a Canadian Inuit community of 1600 inhabitants at 70 degrees north. By means of integrated photovoltaic cells, ‚solar balloons' harvest the summer light and subsequently store the energy for the long winter season. The balloons are attached to (and provide electricity to) buoys that measure environmental changes such as the variations of ice thickness throughout the year.

G2
The Mongolian dandelion seed, impregnated with light
Jeewon Park, Nakyong Kim, Jiyoon Jung, Kimoon Park & Wongyu Yang, Inje University (Republic of Korea): 2nd Prize 2012

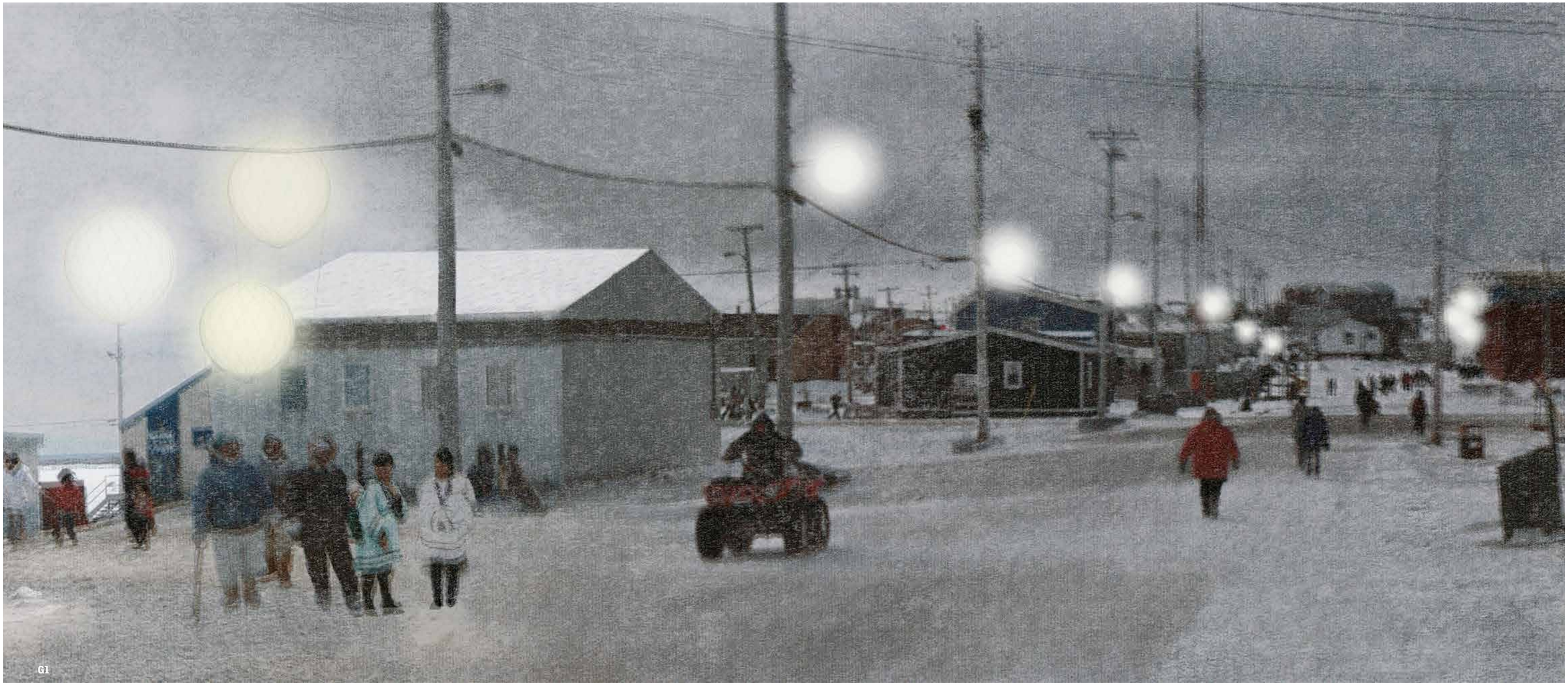
Inspired by dandelion seeds that move with the wind, the team from Korea designed the 'neo-ball', a balloon-like luminaire intended to accompany contemporary nomads on their journeys. The helium-filled balloons, which consist of a bio-based polymer, capture solar energy during the day, store it in a battery and release it again as light during the night.

G3
Memory of Light
Qingsong Han, He Dong Peng & Peishu Han, Xi'an University of Architecture and Technology (China): Honourable Mention 2012

With 'Memory of Light', the three Chinese students propose a new kind of brick to restore the derelict parts of the city walls of their hometown, Xi'an. Two thirds of the brick consist of traditional clay whilst the outermost part contains a luminescent additive that absorbs light during the day and gives it off again at night. At daytime, the new bricks are barely discernible within the masonry whilst at night they provide a clear indication of where the walls have been restored.

G4
Luminous ecosystem
Pablo Viña García-Inés & José Antonio Guerra Paz, Universidad Alfonso X el Sabio (Spain): Honourable Mention 2006

In what is probably the most unusual application of 'light storage' suggested in the award so far, the two Spanish students conceive an aquarium lit by bioluminescent and phosphorescent jellyfish and other marine species. Some of these animals need to be regularly exposed to sunlight to restore their luminosity. This is achieved by letting them pass through a 'load room' where sunlight can enter through optical fibres.



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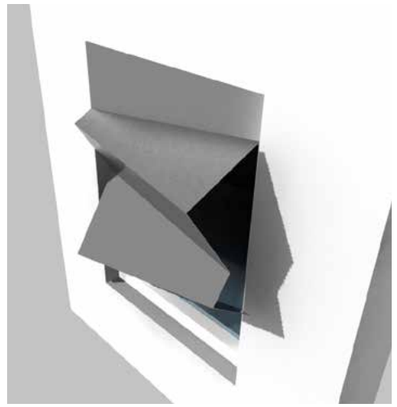

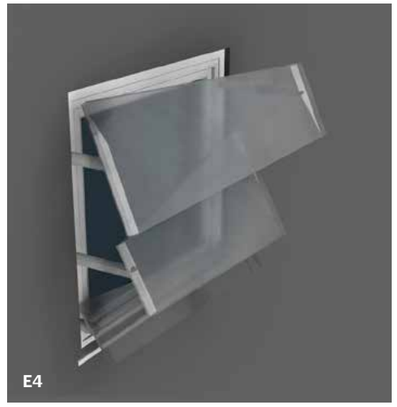
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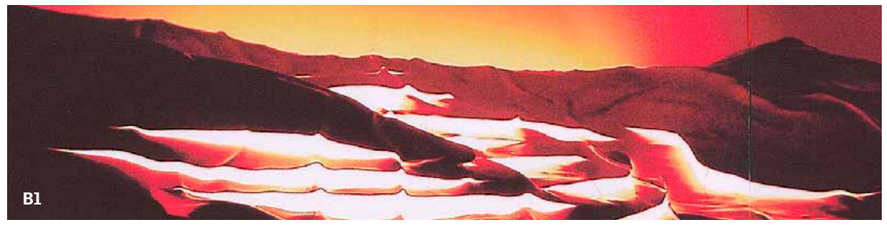
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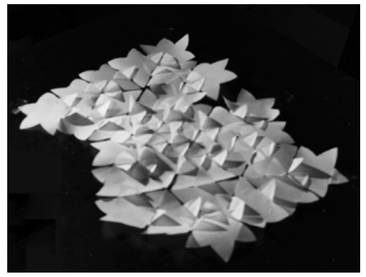

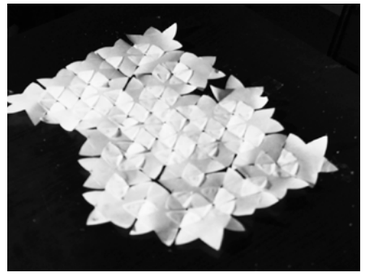

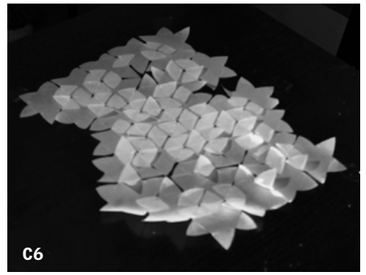
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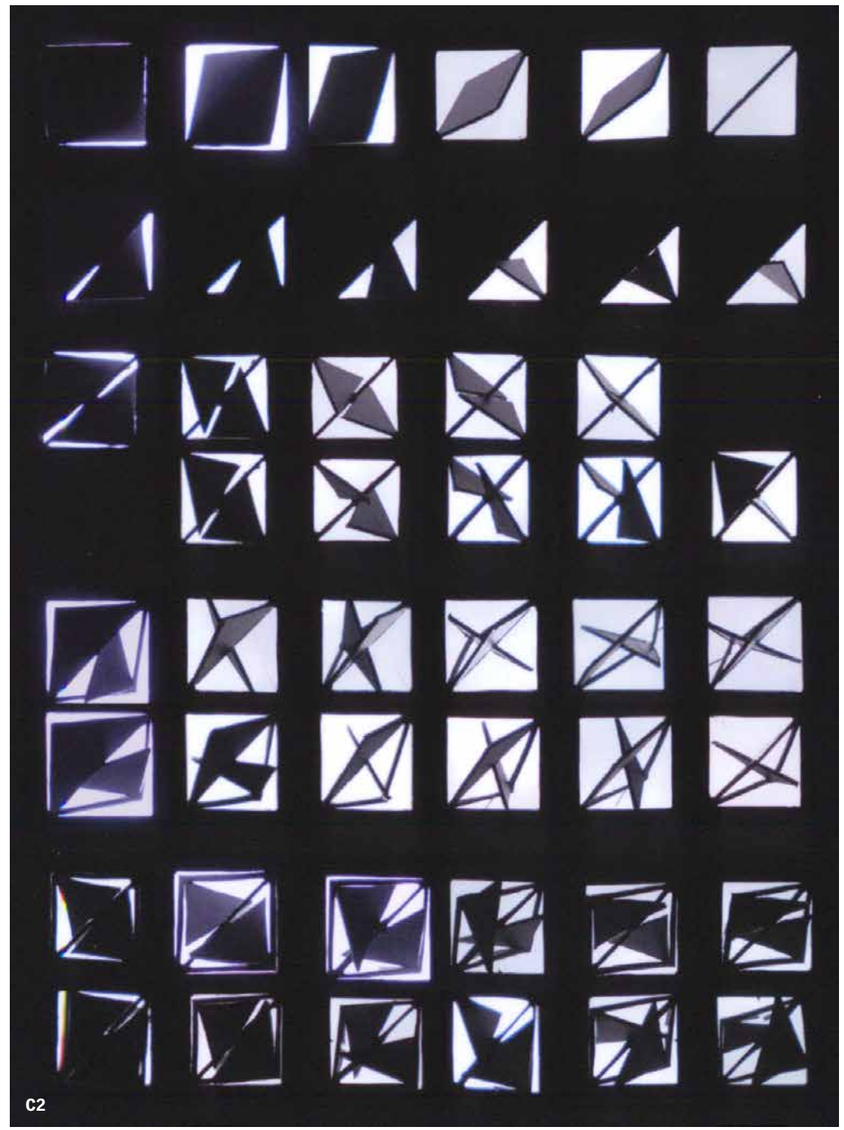
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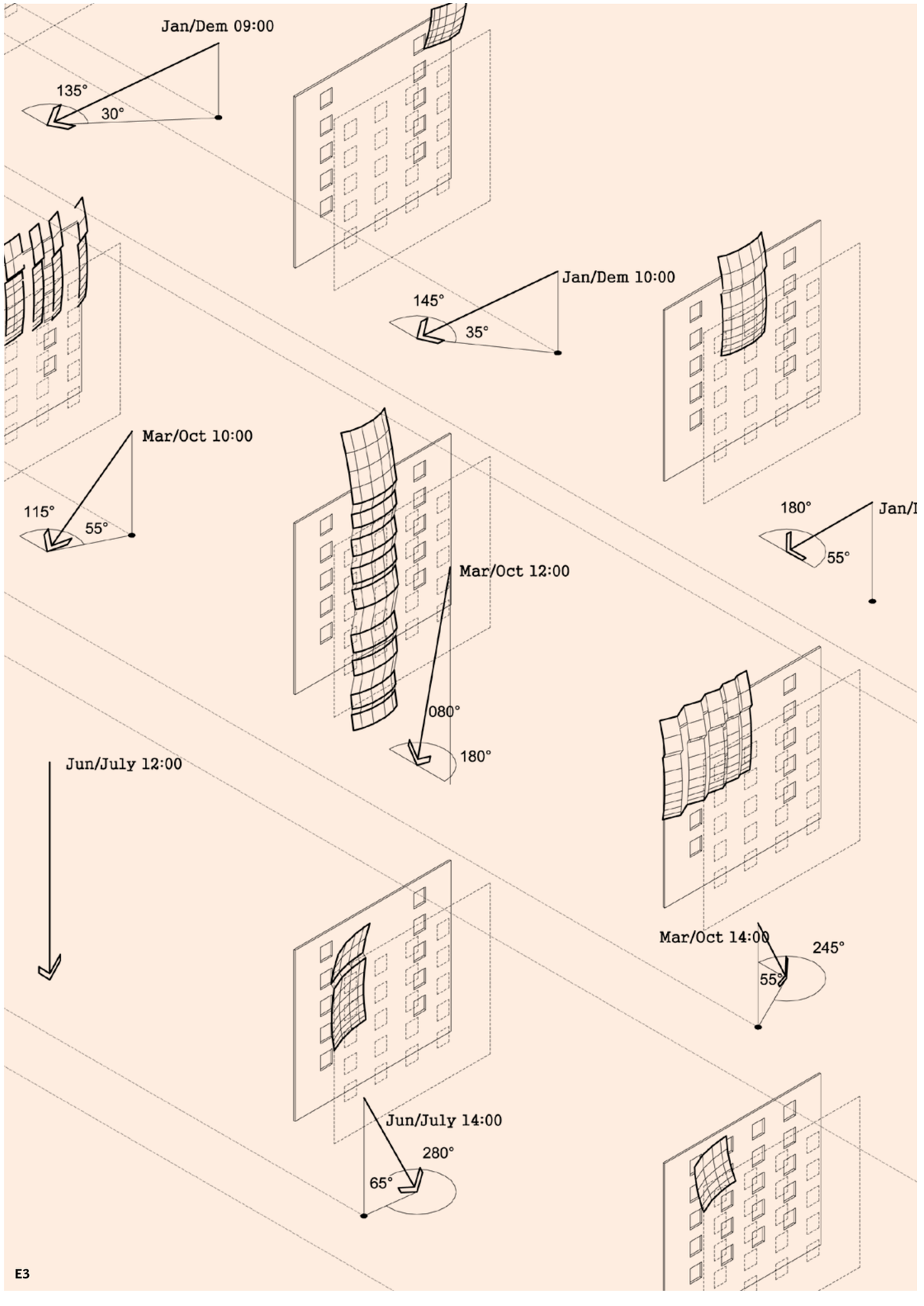

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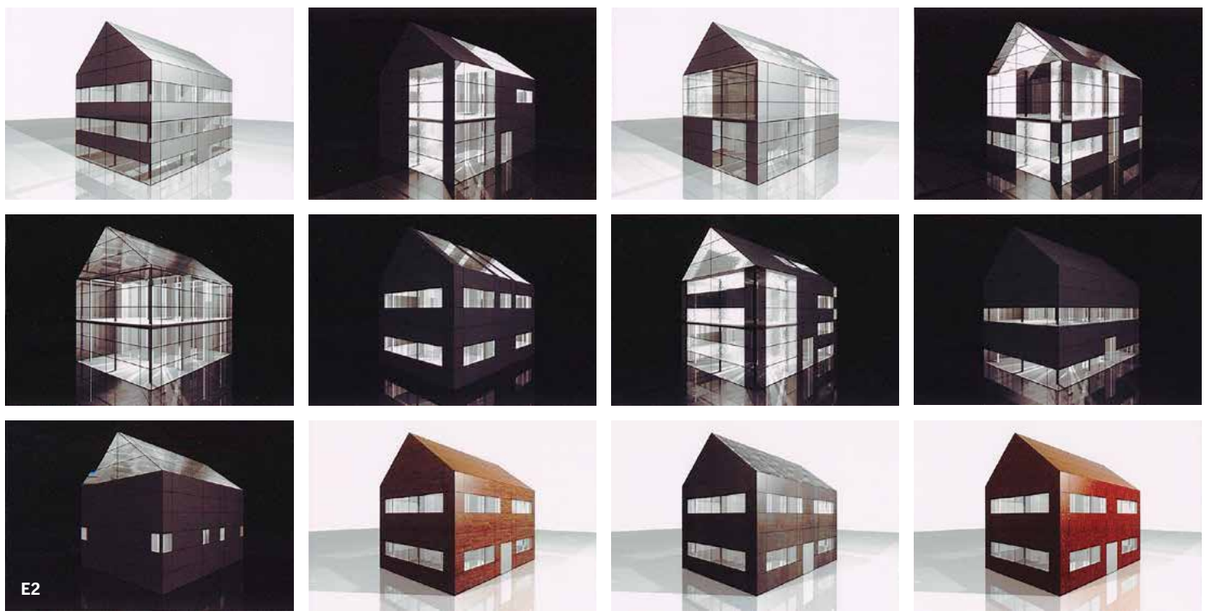

FURTHER INFORMATION ON P. 13–15

10 YEARS OF DAY-LIGHT

The International VELUX Award for students of architecture has experienced tremendous growth and success during its ten years of existence. Its anniversary this year is also a good opportunity to reflect: on the relevance of daylight in architectural education, as well as on the key themes and questions raised by the students over the years.

The following article is based on the jury reports of the International VELUX Awards 2004 – 2012, as well as on essays by and interviews with the former jurors. Documentations of all previous International VELUX Awards can be downloaded from iva.velux.com.

By Jakob Schoof

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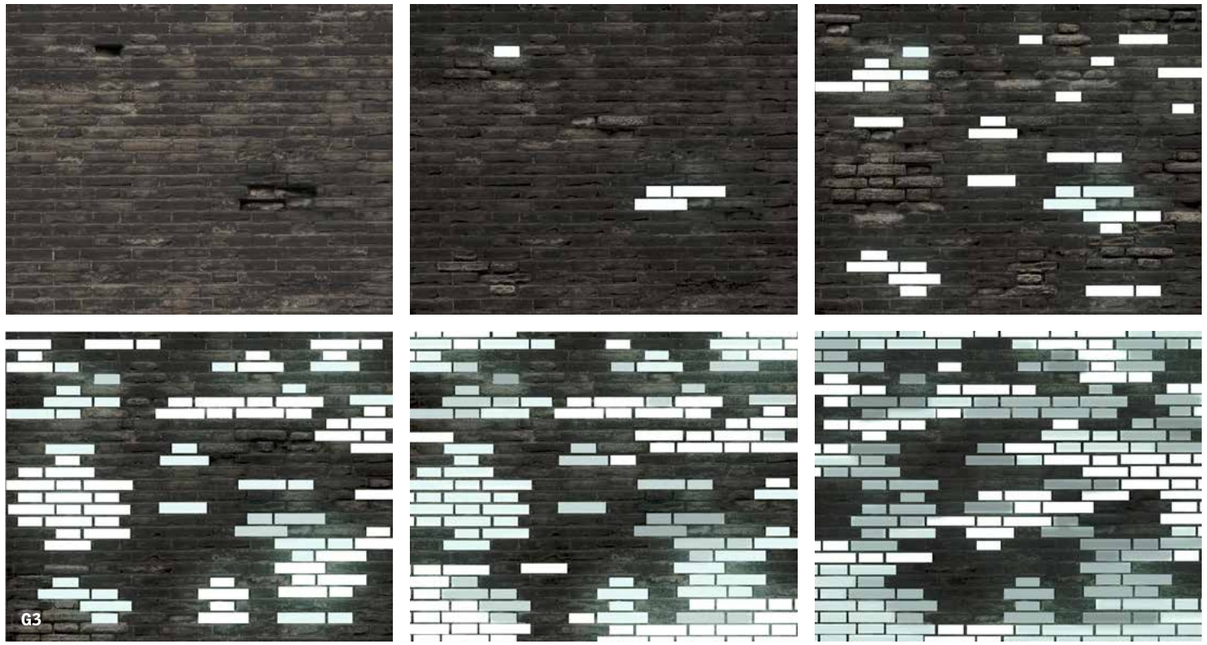

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"What the jury was looking for was not necessarily complete or buildable projects, but merely projects that celebrated the privilege of being a student – with the naivety intact, with curiosity, with the willingness to take a risk and with a mindset for experimental thinking 'out of the box'."

From the jury report 2008

SO FAR, NO FEWER than 3,959 projects have been submitted to the International VELUX Award. From modest beginnings in 2004, submissions for the 2014 event have risen to over 800 from more than 50 countries.

And while these figures certainly do not tell the entire story of the award, they do reveal a growing interest among students of architecture in the theme of daylight. Two main reasons for this growth, among many others, can be identified: the relevance of daylight and its openness. Daylight influences our lives on all scales, from the urban realm to the metabolism of a single cell. And it lends itself to a wide array of potential approaches that seek to introduce daylight into buildings.

THE RELEVANCE OF DAYLIGHT

"Light is the material that makes architecture", wrote the jury of the International VELUX Award in 2004. Hani Rashid, chairman of the jury in 2008, added: "I think the great thing about this competition is that it hits the nail on the head: architects from everywhere have been interested in light. Light is a metaphysical instrument, it's a tool of expression, it's a way to understand form and time. By tapping the light, you tap a cultural DNA of a place..."

The relevance of light, and of daylight in particular, has not always been the same in architecture, but it has without doubt grown in the last decades. According to Kengo Kuma, juror in 2006, "the shape and the form were the main themes of architecture in the middle of the 20th century. But now the main theme has moved from the form to the phenomena, and light can be the main theme of today." This refers in particular to daylight, says Kuma: "Basically natural light is stronger than artificial light in a philosophical sense. The strongest idea is to focus mainly on natural light [...]"

The phenomenological and atmospheric qualities of daylight have been an important theme in the award right from the start. In 2004, juror Ole Bouman said: "Light is not what it used to be. The manipulation of human emotion by means of architecture has become a conscious strategy [...]". According to Bouman, authenticity in architecture often comes through the use of daylight. "Architects are often asked to go back to making 'real' architecture, to creating an authentic topology, a true manifestation, a manifesto against the artificial, ephemeral manipulations of electronic light sources [...] Whatever we may think of this counteroffensive, the most interesting forms of resistance are to be found in concrete proposals for the application of daylight."

Another key aspect of daylight – its relevance for human health – was raised by juror Craig Dykers from Snohetta in 2004: "It is apparent that light and air share common paths toward health. In a very real way we cannot be without whatever it is that the sun gives us. However, it is also important to consider what it is that we give the sun in return." In the last two or three award events in particular, the role of health and well-being in the students' submissions has become ever more important, and there is good reason to assume that this trend will continue in the near future.

OPENNESS AS A KEY TO SUCCESS

Obviously, the relevance of daylight extends far beyond its atmospheric and health-related qualities. To think about daylight in the built environment literally opens an endless array of possibilities and potential approaches. This applies particularly to students, who are in a unique position to 'think out of the box'. According to Eva Jiricna, juror in 2008, this openness is precisely what is needed in architectural education today: "When you are a student, it's the last time in your life when you can work in completely unlimited conditions: without a client, without concerns for cost or planning approvals...".

As Juan Miró, juror in 2012, remarked, "it is clear that the students have been inspired to think about the future and ask – what can we do?". Overall, the juries agreed that asking the right questions in an intelligent way is more important for students than looking for straight answers and final solutions. "On the whole I am very satisfied that the students have had the courage to pose these difficult questions, even if they are not qualified to give the perfect answer," said Omar Rabie, juror in 2006. According to Brigitte Shim, who headed the jury in 2012, the work of the students was all about a "promise for tomorrow, the boldness of the ideas; the kind of explorative dimension [...] because, in a way, you are actually putting your faith in the promise of its future as opposed to necessarily figuring out every single aspect."

Nonetheless, as Natalie de Vries, juror in 2010, remarked, "we also found many practical solutions to practical problems." A cursory glance at the projects submitted in recent years confirms the tendency to move beyond the purely hypothetical and explorative, dealing with given programmes and often with existing sites, as well as achieving an elevated level of complexity. This became particularly obvious in 2012, when the students displayed an unprecedented interest in straightforward, applicable solutions rather than merely hypothetical concepts devoid of 'real-life' context.

A MIRROR OF ARCHITECTURAL EDUCATION

With its openness, its international scope and sheer number of submissions, the International VELUX Award provides a unique opportunity to take the pulse of architectural education at a given moment. "Seen as a whole, the projects represent

[...] a cross section of architectural education in Europe today," the jury wrote in 2004. "In that respect all the submitted projects are valuable as examples of different aspects of one large research." Eight years later, the jury felt that it was "literally listening to a global conversation about daylight, from innovative thinking of what might be the future and how we might experience light in a few years' time [...]"

Alongside the students, their teachers have also been actively involved in the International VELUX Award from the start. Their task is to guide the student teams, as well as to review and potentially preselect the submissions. In exchange for this, the teachers receive part of the prize sum and are often also present at the award ceremonies. According to Brigitte Shim, the quality of submissions crucially depends on "a back and forth dialogue" between students and teachers. "I think that the role of the faculty in all of these entries is essential, so important – the guidance, the support, but also the insight and the questioning and ensuring that the students really work at communicating extremely clearly."

To facilitate an adequate judgment of the entries, the vast majority of award jurors so far have themselves been university teachers. It is thus interesting to listen to their own opinions about what makes a good teacher. According to Eva Jiricna, teachers should encourage their students to "explore, experiment and maximise the level of imagination". Hani Rashid adds: "I often believe that I'm teaching at my best when I teach students how to learn, instead of simply how to do things. If you can impart to someone how to ask the right question, you are teaching into the right direction. " For Huat Lim, architectural education is all about experience. "The best way to learn is to walk around places, to sit in a building, to travel , to speak, to talk, to communicate."

There appears to be room for improvement, however, regarding the architecture schools' active involvement and the importance they assign to teaching daylighting in their curricula. Reilly Hogan, first-prize winner in 2008, remarked that "designing through light has been my personal interest, rather than one taught through the school's curriculum". He says that where daylight does play a role, it is often more of a technical, performance-based pursuit. And according to Ruan Hao and Xiong Xing, the second-prize winners in 2008, "looking back at how we were taught to utilise sunlight to make dramatic shadows and sculpting architecture spaces, we couldn't help but wonder, do we design a design, or do we design for better life?".

A WORLD FULL OF DAYLIGHT

The openness of the award is reflected in a huge variety of individual topics and approaches in the submissions. Quite literally, as Omar Rabie puts it, "the students have more ideas than we can imagine." The scope of the projects ranges across all scales from the urban to the smallest building component, and literally across the entire globe. Some students have explored phenomena of perception in a rather abstract way, while others have submitted full-fledged designs for buildings or building components. While a number of submissions have expressed a keen interest in technology, the majority of them so far have focused on the interaction between light and space. Last but not least, the students have drawn from a wide range of sources of inspiration – including art (from the paintings of van Gogh to the works of James Turrell) and nature.

As many of those involved in the International VELUX Award over the years have remarked, the average quality of submissions has increased. While in 2004, the jury still noted: "The jury was surprised by the lack of actual experimental thinking. One of the reasons might be that many of the projects were not tailored to the award", it has now become commonplace for students to design their projects specifically for the award.

In many cases, the level of detailing in the projects has also increased, as has their complexity. The best submissions are now truly multi-dimensional, tackling multiple issues (from how to embed the design in an urban setting, to questions of usability and construction) at a time. To an increasing extent, they are also targeted at 'making things work' in a technical sense and reveal a thorough understanding of technology that was not present in earlier award events.

The international outreach of the award has also grown significantly since 2004 – and this again is reflected in the student projects. Not only has the award "become truly global and offers a chance for students to see their work in relation to peers across the world", as Juan Miró remarks. There are also significant cultural differences in the attitude towards daylight from one continent to another, as Momoyo Kajima, juror in 2010, says: "I think there is a cultural element in light, and there are social aspects that relate to the area or latitude or season or time. In the competition, it became evident that a lot of projects from Japan or other Asian countries dealt with light in very different ways from the way that the Europeans did."

From about 2008 onwards, a remarkable geographical shift has taken place within the audience of the International VELUX Award, with 50% or more of the award-winning projects coming from Asian countries in the last two events. There is also another aspect to the 'globalisation' of the award, however. Not unlike their 'grown-up' peers, architecture students have become 'frequent travellers' with networks across the globe. Many of them – such as the first-prize winners in 2012 – even study in universities far from their home countries. "There are no boundaries to student projects – as students and teachers meet and study across continents as well as they work with exotic places and cities – far from their actual location," wrote the competition jury in 2012. This may, of course, present the danger of producing an unspecific kind of 'globalised' architecture: "It is a challenge to avoid a global uniformity with repetitive concepts, shapes and slogans and it seems that many students miss the specific relations to locations and orientation."

> "Light of the future is not necessarily light and high-tech. Light should be about perception and exploitation. Light should indicate hope and the future should be about optimism. Light reveals and light has a social dimension."
>
> From the jury report 2004

Yet there is reason to be optimistic in this respect – as the prize winners 2012 in particular proved with their poetic and sensitive intervention in the landscape of the Swiss Alps. Already in 2006, chairman Per Olaf Fjeld expressed a similar optimism: "The strength of the award is that there are participants from all over the world, and light itself has a map, it exists everywhere. But the architectural conditions related to light are also different from place to place, and one can very much see that within the variety of the projects this has, to some extent, been taken into consideration [...]"

Indeed, the submissions have become far more responsive to context over the years – even if they have not necessarily always been designed for a specific site. 'Context', in this respect, also implies social responsibility, a connectedness to real-life problems, and an increasing number of projects that dealt with existing cities and buildings. "I found a lot of my concerns about creating a better quality of life in cities being dealt with by the students," said juror Will Bruder in 2010. "A lot of the work addressed social responsibility, which is a trend that I also see in architecture. Students are not just concerned about sustainability, but about building a better place in a social way."

ISSUES OF REPRESENTATION

As in any other architectural competition, participants in the International VELUX Award are faced with the challenge of how to condense a huge number of ideas on just one or two competition boards, and how to express spatial ideas in a two-dimensional format. According to Eva Jiricna, students should strive to make the presentation a "joy ride for the jury". She adds: "The need of getting a clear message is more and more important in competitions: when a jury has to judge some 700 projects, it cannot spend a long time trying to interpret what a student wants to say."

Yet the award theme "Light of Tomorrow" also presents another, very specific difficulty, explains Brigitte Shim: "How to represent such an ephemeral and difficult thing as light. How do you show light, how do you describe light and make it understandable to other people?" Without doubt, the rendering skills among students have greatly increased over the last ten years, as has computing power to support photorealistic imagery. This development, however, was received in an ambiguous way by the juries. In 2004, "the jury raised the general question of whether the computer is now too powerfully integrated in the schools. And whether this fact limits the experimentation and thinking about the unknown: going to the edge, finding the essence".

Four years later, chairman of the jury Hani Rashid expressed optimism regarding these questions. In his opinion, the award showed that the computer "is no longer just a fascination in pushing buttons and creating nice forms, but is finally becoming a facility, a realistic and obvious tool in the work of research". Furthermore, students have acquired an increasing 'media competence' also in that they know when to do without computers. In the field of daylighting, this applies particularly to the simulation of light

"Related to light I can only see optimism because it is a free material and it is there to be used. In the relationship between the body of mass and the body of light there will always be a spatial attitude, a spatial possibility."

Per Olaf Fjeld

interacting with materials. Reilly Hogan, first-prize winner in 2008, said: "Computer simulations proved to be highly cumbersome when dealing with caustic light (light reflected or refracted by a metallic or glass surface onto another surface), and rapid experimentation was difficult. So I worked almost entirely through physical models." Likewise, Dean MacGregor, winner of the third prize in the same year, remarked that "from the beginning I knew that rendering wasn't an option for this project. Therefore photography soon took over from the superficial attempt to represent light through the computer".

DA CAPO: LIGHT OF THE FUTURE

This year, the International VELUX Award will be awarded once again, for the sixth time running. At the time of writing this article, neither the eventual winners nor the approaches they chose were known. It is therefore a good opportunity to go back to the question of what represents the "light of the future" today?

To quote Craig Dykers' verdict from 2004 once again: "In a very real way we cannot be without whatever it is that the sun gives us." This existential role of daylight to our health and well-being, while implicit in many projects already, is still waiting to be fully exploited by the students. This might imply taking a step back in the history of the award, going from the urban to the private realm – and closer to the human body, but with increased knowledge and a refined toolbox that today's students doubtless have at their disposal.

The challenge posed by health and well-being also relates to recent findings from chronobiology about the non-visual perception of light, and about how light relates to diurnal cycles in our minds and bodies. Eventually, this gives rise to questions such as:

What could a 'circadian' architecture look like? What qualities would it need to have?

Answering this question is certainly tricky, and even scientists and experienced practitioners are struggling with it. It would, however, be most interesting to see the students' ideas about this topic highlighted in the next editions of the award.

As many of the simple questions have already been asked (and in many cases also answered) in the International VELUX Award, it is mainly the more complex questions that remain. The logical next step would therefore be to form interdisciplinary design teams to answer them. While this might be asking (too) much from the participants of a student competition, it would certainly reflect the trend towards integrated design in architecture, and the increasing number of interdisciplinary master studies in the field of sustainable building design.

Furthermore, with computers having become "a realistic and obvious tool in the work of research" (Hani Rashid), one would also expect to see more quantitative evaluations being carried out on the projects in the future. The corresponding simulation tools have become ever easier to operate, and experience has shown that this kind of evaluation need not hinder architectural creativity. A good example is the VELUX Daylight Visualizer, which provides realistic estimates for both the quantitative and qualitative effects of daylight in spaces, and is increasingly used by students and practitioners worldwide.

KEEP ON TRYING

After the jury sessions of the last few International VELUX Awards, the jurors were asked whether they had any recommendations to future participants. In his answer, Peter Stutchbury gave the following reasons to participate: "In order to learn about anything you must participate. There are very few international awards for students in the world, and this competition has a wonderful standard. I encourage students to participate in this sort of award in order to lift their own understanding of major architectural issues... When you do a competition like this you do something that has the potential to shift your world."

Looking ahead, there is no doubt that the participants will continue to find new questions to raise, and new approaches to daylight. As the jury wrote in 2012: "The projects investigate so many new aspects of light, thereby showing us that there is still a lot of work to be done, thinking about tomorrow, inventing the future and not taking light for granted"

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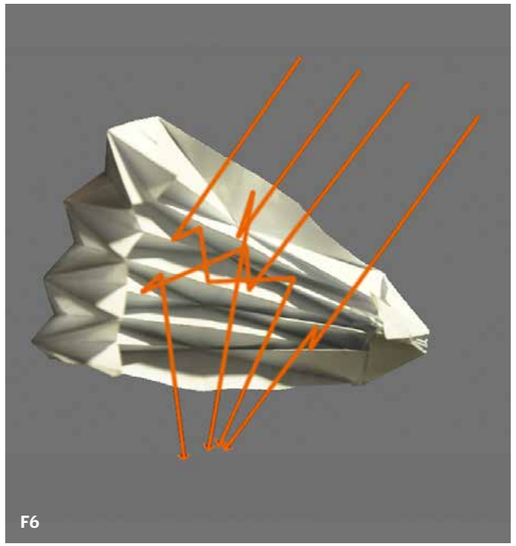

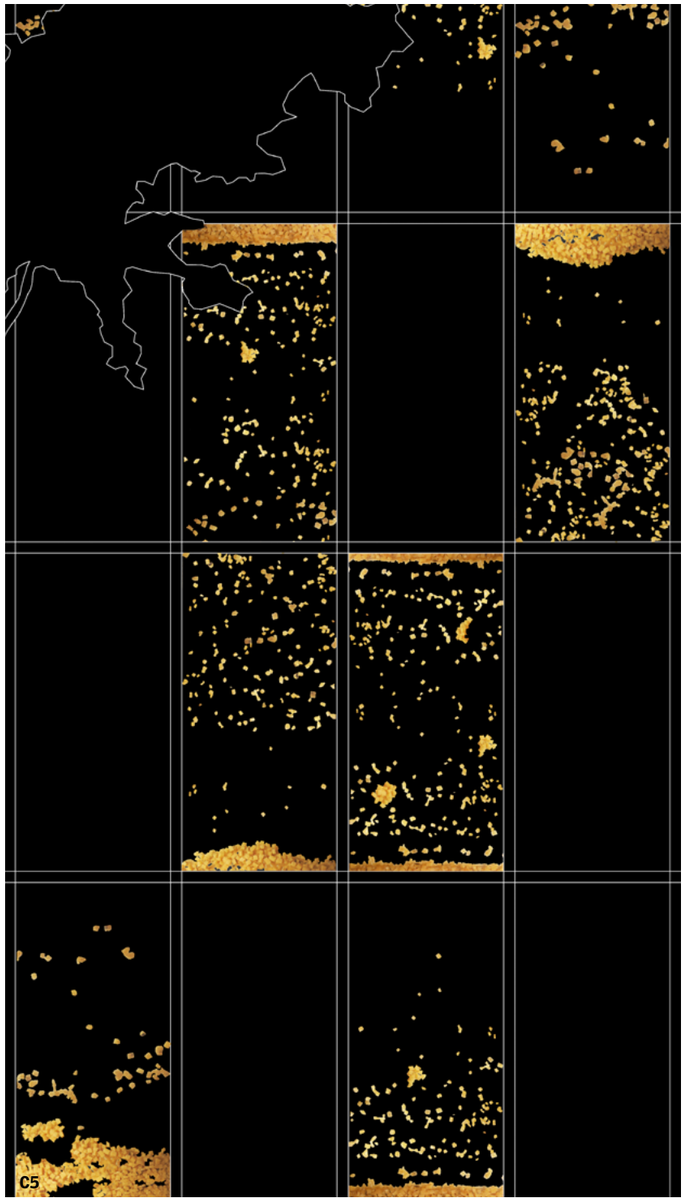

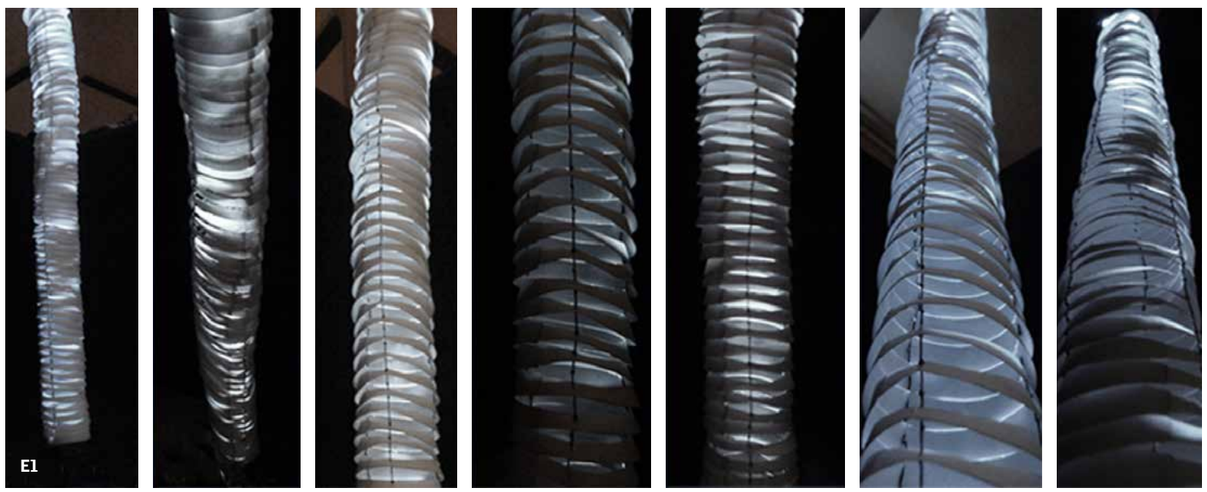

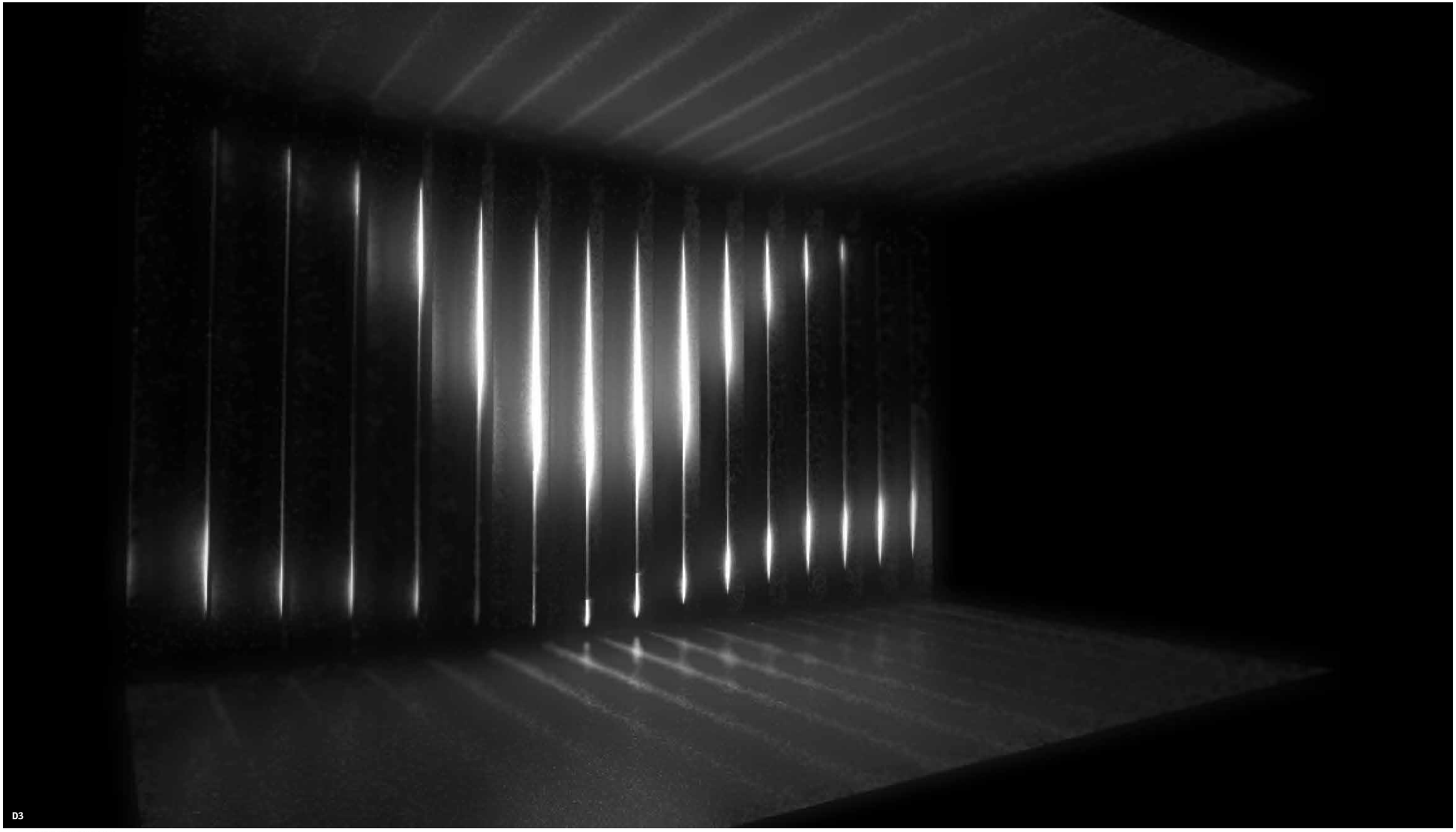

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DISCOURSE

LEARNING FOR THE UNKNOWN

"Aspiring architects have to develop their position with regard to society as a whole. An architect is not only responsible for maximising a client's profit but is always involved in the development of entire cities, as well as of our building culture."
Hubert Klumpner

Architectural education, like any form of education, is all about the future. There is a dual challenge connected to this fact. Firstly, as the future is impossible to predict, education is always faced with uncertainty as to what might be the most useful knowledge to convey to students. Secondly, and despite this, schools of architecture have to be early adopters of change in the professional field: who, if not they, will prepare future generations of architects to "be the change they want to see in the world", to quote Mahatma Gandhi?

By all that we know today, the future of architecture will be characterised by an unprecedented level of urbanisation, an increasingly circular economy and a much greater use of renewable resources, including daylight and solar energy. Apart from urbanisation, most of these concerns played only a marginal role in 20th century architecture. Yet the tide now seems to be turning, and the signs that a profound change to architectural practice and education is necessary – and that it would be beneficial for many – cannot be ignored any more. According to Rob Fleming, professor at Philadelphia University, the rise of sustainability has prompted the "foundations of design education to shackle free of decades, if not centuries, of inertia". Mark Wigley, dean of the School of Architecture at Columbia University, calls for future architects to "jump into the unknown, trusting the formulations of the next generation that, by definition, defy the logic of the present". He continues: "We have to give students the capacity to change the field itself, to completely redefine the state-of-the-art".

These are bold claims indeed. How do architecture schools live up to them in practice? And what do teachers and recent graduates think about the challenges that architectural education is facing?

The statements and articles in this issue of Daylight/Architecture provide some answers to these questions. They depict the architect as a professional who has to bridge the gap between widely diverging, and sometimes contradictory, requirements. To name but three of these, architects must retain the position as generalists that they have always had in history, but at the same time keep up with the increasing body of specialist knowledge in the field of building design. They have to fulfil the requirements of their clients who pay them, but at the same time, they are expected to work in the interest of the wider society. And lastly, they have to put human beings into the centre of all their endeavours despite being restricted by an increasing amount of regulation, and working in an increasingly technology-driven environment.

Architecture as 'frozen politics'

Essentially, every contemporary architect serves two clients: the one who pays him – and society in general. Peter Thule Kristensen, dean of the School of Architecture at the Royal Academy of Fine Arts in Copenhagen (KADK), explains: "Nowadays architects can no longer afford to pursue a purely introverted artistic approach. They must respond to modern-day issues that impact on society – for example, the unavoidable challenge of sustainability".

Hubert Klumpner, dean of the Department of Architecture at ETH Zürich, compares architecture and urbanism to "frozen politics", and adds: "We see studying as the starting point of a lifelong learning process that prepares architects to assume responsibility in a democratic society".

Many of the experts who contributed to this magazine, therefore, stress that it is not sufficient to train architecture students merely to be building designers. "As long as architectural education only aims at building design, it will fail," claims Hyun Seo, head of the School of Architecture at Haiyang University in Seoul. According to Seo, students should be "trained to become leaders who can manage any kind of team or project regardless of the subject that it deals with".

This points to another quality that future architects will need: the ability to work in increasingly interdisciplinary teams. This, in turn, requires both "communicative intelligence" (Hubert Klumpner) and "a respect for and knowledge of other disciplines and professions" (Karl Otto Ellefsen). Respect, in this context, does not imply subordination – on the contrary. Most of the teachers stress the importance of architects retaining their position as generalists, despite all the current trends towards specialisation. Maintaining a holistic view will, they argue, be both beneficial for the quality of our buildings and give architects back some of the influence they have lost to others over the last decades. This will, however, not come by itself, says Claes Cho Heske Ekornås, winner of the International VELUX Award in 2004: "We will have to make this happen ourselves by being more proactive [and] placing ourselves in the driver's seat. As an architect, you are sometimes the only one with a full overview of the different stages of a project. We should use this position to our advantage if we want to avoid being reduced to the role of just another consultant."

The architect as conductor and translator

It seems obvious that this role of architects as 'conductors' of project teams needs to be learned to a much greater extent in academia. Many architecture schools are reacting to this already, for example, by including more and more design/build projects in their curricula. Hubert Klumpner stresses that professors need to be skilled communicators in our days who can 'translate' between different domains of knowledge, as well as between the world of specialists and the general public.

Increasingly, intercultural 'translation' and presentation skills are also in demand for architecture students as they prepare to enter a globalised labour market. Student competitions such as the International VELUX Award are a valuable opportunity to learn these skills. Peter Stutchbury, award juror in 2012, considers competitions an opportunity for students to "lift their own understanding of major architectural issues". For Luka Piškorec, from the ETH Zürich, "competitions are like questions asked by society to which architects must respond. And only the architect who has something to say, comment or ask is competent to work in the interest of society".

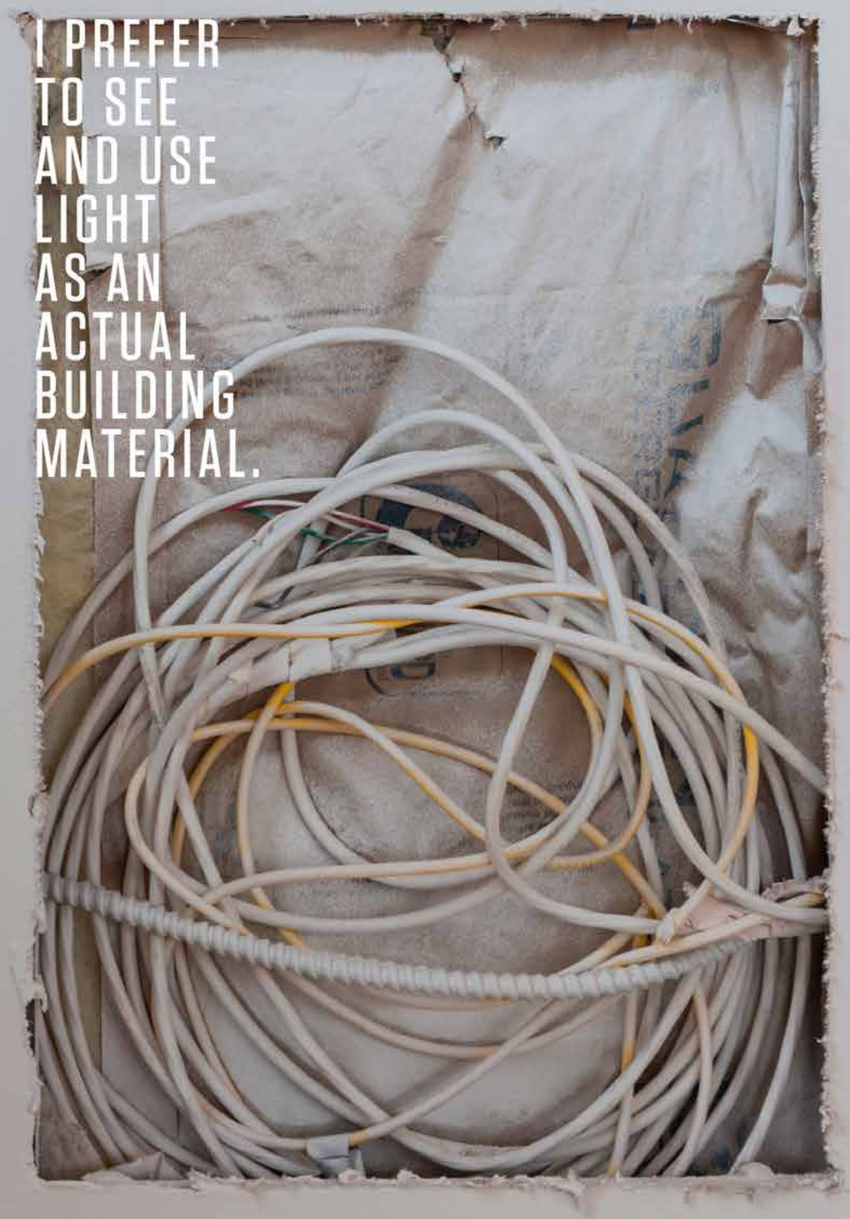
Intellectual freedom in a state of uncertainty

Architecture schools nowadays need to navigate between two extremes: should they focus on preparing their students for the practicalities of everyday office work, or give them the freedom to pursue their own agenda and learn to "ask the right questions" (Hani Rashid)? Quite probably, universities are well advised to do the latter. The former winners of the International VELUX Award all reported that only after graduating from university did they learn "the ways of the building site" (Bo Li, Ge Men), become acquainted with "the complex process of following a project from start to finish" (Claes Cho Heske Ekornås), and learn to "work with a client, dealing with the fact that the client's priorities and processes are often different from those of the architect" (Reilly Hogan). On the other hand, all former award winners hold in high esteem the freedom that they were offered at university and the fact that academic training taught them to work independently and find their own ways in life. A good teacher, says Claes Cho Heske Ekornås, "not only focuses on the end result, but just as much on the process of getting to the result, and on the development of the individual student".

Intellectual freedom and the capacity to think independently are all the more important as architectural education has to prepare students for a future that is inherently uncertain. As Karl Otto Ellefsen puts it, "we feel like we are educating young people to master knowledge that so far has never been produced and to qualify for jobs not yet existing". While it has often been questioned whether architecture still qualifies as a form of art, artistic thinking can be extremely helpful in this state of uncertainty. Peter Thule Kristensen stresses that architectural education ought always to remember "the recognition inherent in art that there are no definitive answers or unambiguous questions". Louise Grønlund, winner of the International VELUX-Award in 2006 and now herself a teacher, adds: "A school of architecture should be a place for developing your artistic talent, and for experimenting with projects, some of which might fail – but failures tend to be a valuable source of learning".

Education needs a value base

Over and over again, the teachers and recent graduates alike stress the importance of the architect's social responsibility. "Our dream is not only to design buildings but to improve people's lives," say Bo Li and Ge Men, winners of the International VELUX Award in 2012. Will Bruder, who sat on the award jury in 2010, observes a similar phenomenon: "Students are not just concerned about sustainability, but about building a better place in a social way". Clearly, the human aspect inherent in architecture ought to be nurtured right from the start in architectural education. This also means that teaching cannot be limited to knowledge transfer – it also requires an underlying value base. Students need to be encouraged to develop trust, solidarity, and empathy – and they can only do so if they encounter these same qualities in their learning environment at university. As Rob Fleming writes, "the kinds of values and behaviours learned in design school set the stage for a lifetime of impact – both positive and negative". If value-based teaching is taken seriously, however, it must also be reflected in new forms of teaching and new content in the academic curricula. It will be interesting to see in the coming years whether, and how, this change is really going to happen in architecture schools worldwide. There is little doubt, however, that it will be worthwhile. After all, as Hyun Seo says: "College education must prepare students for life rather than for a specific career".



ENRIQUE BROWNE

A WORLD OF OPPOR-TUNITIES

Today's young architects will play a key role in shaping the future world we live in. But what principles and ideals guide them in their daily work? What qualities that they have or have not learnt at university do they consider crucial? And what role should daylighting play in architectural education?

On the following pages, former winners of the International VELUX Award, along with their former teachers and the heads of school where they studied, have given answers to these questions. The accompanying photographs were taken in some of the cities where the respondents live and work: New York and Ithaca (USA), Zurich (Switzerland) and Seoul (South Korea). Welcome to an intergenerational and intercultural dialogue on daylight, architectural education, and the individual responsibility that every architect has to take in our society.

Photography by
Richard Barnes &
Lucille Tenazas (p. 34 – 47)
Stanley Wong (p. 50 – 59)
Ferit Kuyas (p. 61–71)

QUOTE BY **OLE BOUMAN** PHOTOGRAPHY BY **RICHARD BARNES**

OF ALL NATURAL PHENOMENA,
LIGHT IS THE MOST ENDURING.

OLE BOUMAN

2004

SCHOOL OF ARCHITECTURE AND DESIGN (AHO), OSLO

CLAES CHO HESKE EKORNÅS

Claes Cho Heske Ekornås won the 1st prize in the first ever International VELUX Award in 2004, when he had just graduated from the School of Architecture and Design (AHO) in Oslo. He has been employed at Jarmund Vigsnæs Arkitekter in Oslo, Norway, for the last nine years. His project portfolio ranges from design of single-family homes to competition projects and larger design and renovation projects.

"Looking back I can see that the most valuable thing I learnt at school was to work independently. The kind of teaching where you are allowed to find your own way, not being told what to do and how to do it, but listening, finding your own voice, being enlightened as you go along.

As a practising architect, one is introduced to the complex process of following a project from start to finish. Society tends to come up with more and more demands and technical building restrictions that we have to implement in architecture. I think it is important that students don't dwell too much on these practical and technical requirements. Rather, they should have a free mind to explore things. Students have a unique opportunity to study different aspects of architecture, something they should enjoy since it is probably the only time in their lives that they will be able to devote so much time and effort to their projects.

A good teacher of architecture sets the scene for this kind of free and independent learning, guiding the student through probing questions and constructive feedback. A good teacher not only focuses on the end result, but just as much on the process of getting to the result, and on the development of the individual student.

My project for the International VELUX Award was my final thesis project. Winning the Award at the gateway to my career gave me confidence that I could bring something to the table in the real world of architectural practice. Daylight plays a special role in Norway, as for half the year we have very little of it, and for the other half, we have light more or less around the clock. This importance of natural light is also reflected in our work at Jarmund Vigsnæs Arkitekter, where we take advantage of it in order to minimise the use of artificial light and to save energy. What I have learnt about light since graduating is to look at this resource in a more nuanced way. After all, sometimes, and in some places, you don't need a lot of light. Therefore I am not sure that general requirements for daylight levels or lux-specifications are necessarily the right way forward.

Like any other architect, my dream is to create architecture that will stand the test of time and be a reference to others. It is obviously hard to predict what exactly is needed to achieve this goal, as the quality of buildings can often only be judged in hindsight. But I think it is at least important to have something to strive for.

Overall, I would call for a better understanding and respect for our profession. But we will have to make this happen ourselves – by being more proactive, placing ourselves in the driver's seat and seeing ourselves not merely as designers but playing a leading role in defining the fundamental terms of any building project. As an architect, you are sometimes the only one with a full overview of the different stages of a project, and you have to deal with all the other stakeholders: the builders, other technical consultants as well as financial experts. We should use this position to our advantage if we want to avoid being reduced to the role of just another consultant.

The best project for me is always the next. Not necessarily the big projects; often the small projects are the most interesting. I hope to be able to continue building my experience, solidifying my platform, and contributing to the growing recognition of architecture in Norwegian society."

RELATED TO LIGHT, I CAN ONLY SEE OPTIMISM – BECAUSE IT IS A FREE MATERIAL AND IT IS THERE TO BE USED.

Per Olaf Fjeld

QUOTE BY **HUBERT KLUMPNER**. PHOTOGRAPHY BY **RICHARD BARNES**

ARTHUR SCHOPENHAUER
ONCE SAID THAT
ARCHITECTURE
IS **FROZEN MUSIC**.

I WOULD ADD THAT

ARCHITECTURE AND URBANISM ARE FROZEN POLITICS

HUBERT KLUMPNER

2004

SCHOOL OF ARCHITECTURE AND DESIGN (AHO), OSLO

KARL OTTO ELLEFSEN

Karl Otto Ellefsen is Rector of the School of Architecture and Design (AHO) in Oslo, where he also teaches as a professor of architecture and urbanism. Having been educated at the AHO and the Architectural Association (AA) in London, he dedicated most of his professional career to urbanism. Karl Otto Ellefsen has published widely within the fields of urban history, urban planning and architectural critique. Currently the main focus of his research is on the history of urban planning in Norway.

"In addition to the skills that architects needed in previous times, other qualities are required to be a successful architect today. At the same time, architecture schools need to prepare students for a set of very different roles. I would rate the ability for teamwork, the respect for and knowledge of other disciplines and professions, the capacity for serious investigation and the skill to handle architecture in a discursive way as essential qualities that we need to reflect in our teaching.

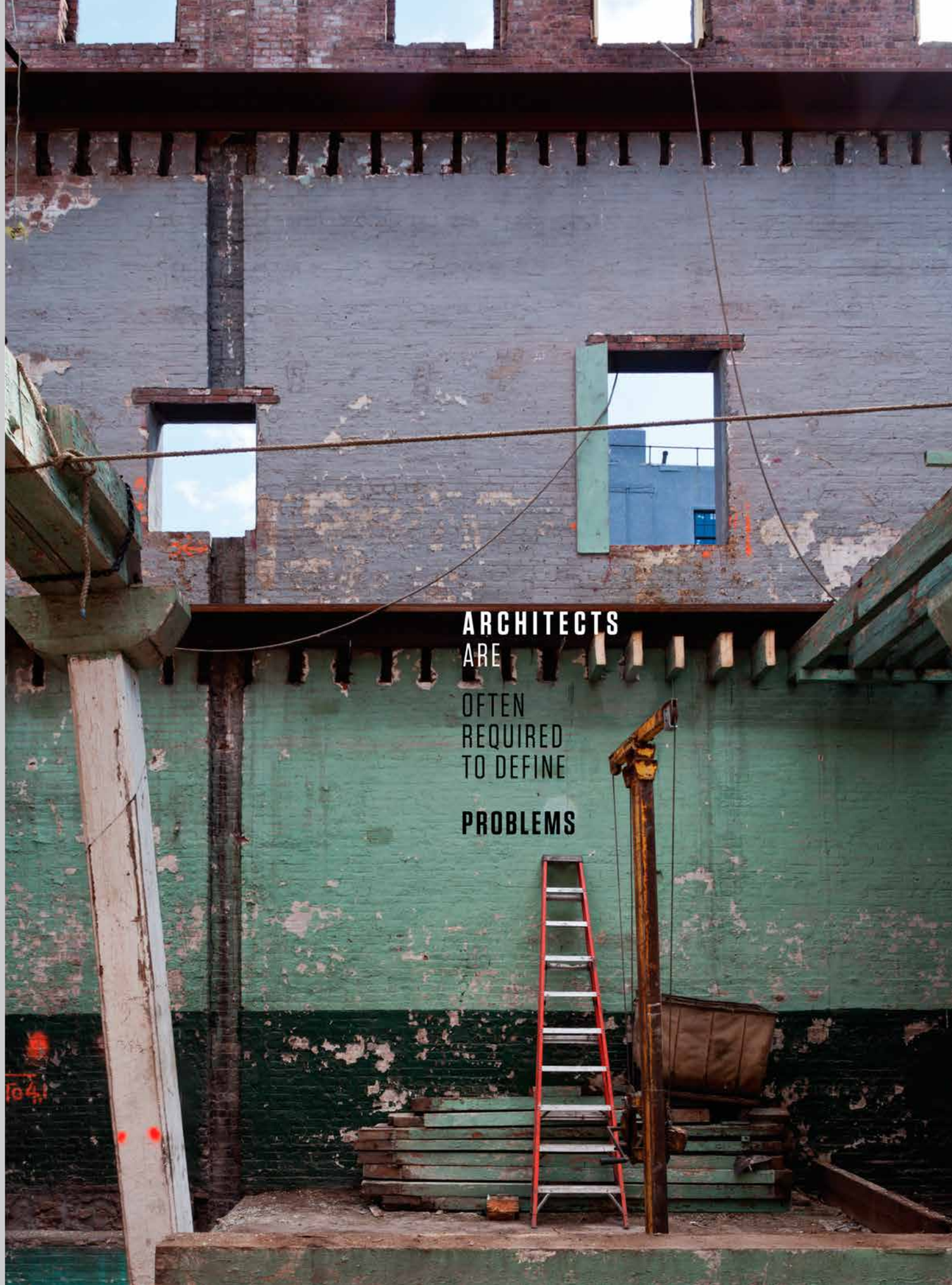
In Europe, there was the possibility that the Bologna system, with its focus on compatibility and the free-flow of competence across national boundaries, would wipe out school identities. But we are witnessing the opposite – a trend of different schools following different paths. Schools seem to be more eager to define their own specific roles. Some focus on research and an academic profile, some dedicate themselves to educating workforce for the future labour market, and some schools, like ours, still believe in architecture as one of the arts and stick to an art-academy tradition in architectural education.

Historically speaking, the curriculum at the Oslo School of Architecture was very much about educating master architects. As a relatively small educational environment, we try to keep up the standard of teaching the students individually. Consequently, we also try to convey to them a set of values that deal with individual responsibility. As an architect, you can never run away from this individual responsibility, even if the topics that you are confronting, such as sustainability, seem impossible to handle as an individual – or if the consequence is that you have to say no to a commission that might bring you wealth and glory but will likely be devastating to the environment and to society as a whole.

In many ways, our school continues to pursue historic traditions of Nordic architecture. This is reflected, for example, by the particular role that daylight plays in our curriculum and in project work in design studios. The focus of Norwegian architecture has always centred around the relationship between building and landscape, earth and sky and light as the primary elements.

At the same time, architectural education in Northern Europe has always had a very close relationship to the profession. Changes in the professional environment, therefore, immediately affect our school. To mention but one challenge arising from this, there is currently a tendency towards hybridisation in the planning and construction process of buildings, where different kinds of professions and fields of knowledge overlap and merge. We feel like we are educating young people to master knowledge that so far has never been produced and to qualify for jobs not yet existing. This means that the foundation and the general part of the education are even more important than before: the ability for spatial comprehension, the ability to draw, the ability to conceptualise. Our students have to master the basics of the craft and, at the same time, be able to both handle and defend this knowledge in a very complex professional setting."

QUOTE BY **HYON SEO** PHOTOGRAPHY BY **RICHARD BARNES**



2006

ROYAL DANISH ACADEMY OF FINE ARTS, SCHOOLS OF ARCHITECTURE, DESIGN AND CONSERVATION (KADK), COPENHAGEN

LOUISE GRØNLUND

Louise Grønlund, winner of the 1st prize in the International VELUX Award 2006, is a Ph.D. student at the Aarhus School of Architecture in Denmark. Since graduating, she has been employed at several Danish architectural offices, taught at The Royal Danish Academy of Fine Arts, Schools of Architecture, Design and Conservation, School of Architecture (KADK) in Copenhagen and worked as an independent architect and as architectural photographer. Her Ph.D. project explores daylight, light openings and the facade.

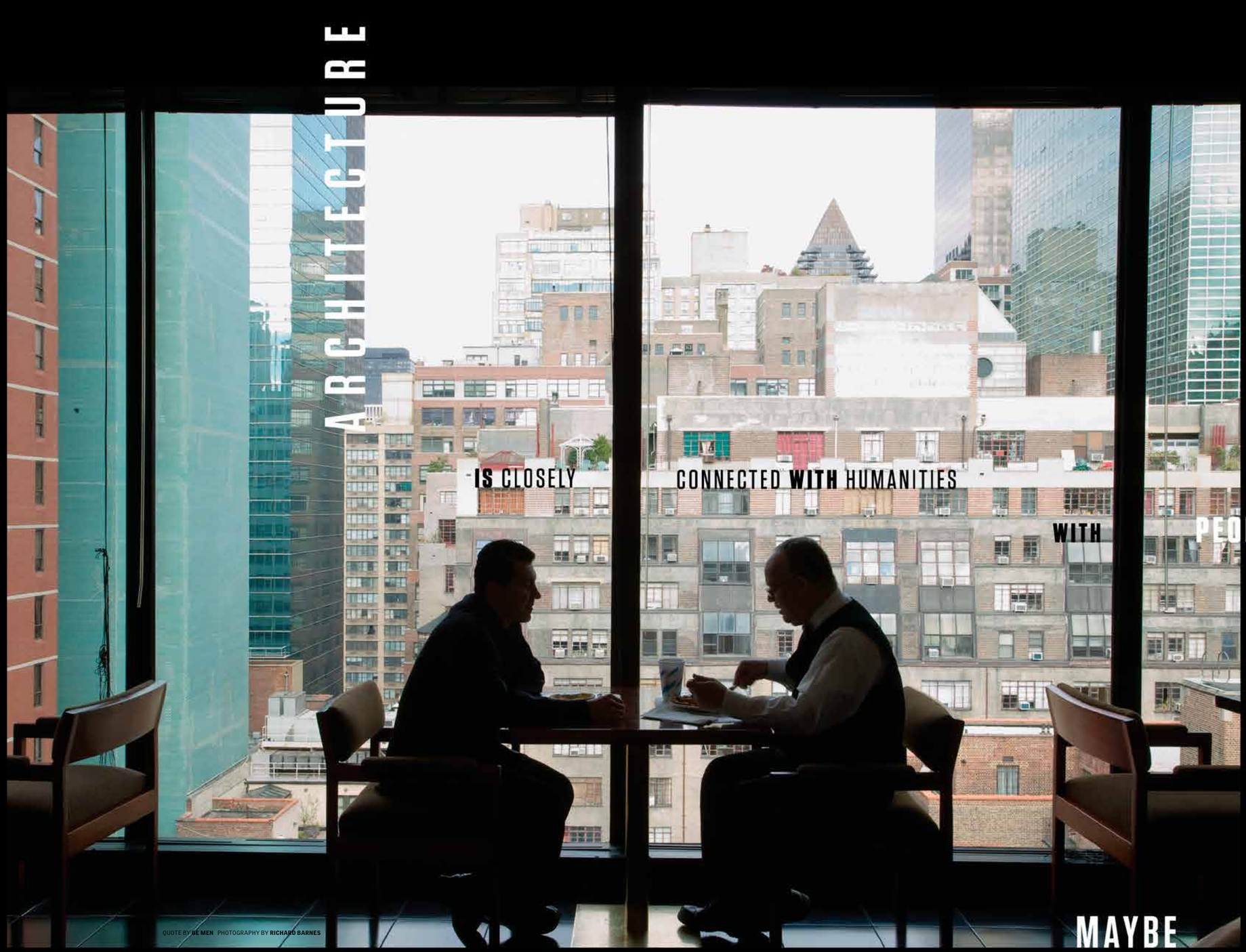
"I have been very privileged that there is a direct line from my thesis project to what I am doing now in my Ph.D. project. In the latter, I focus on the exploration of daylight, light openings connecting indoors and outdoors, and how light openings in different shapes and sizes can draw daylight into buildings. My research is a combination of theory and practical experimentation, where I draw on my knowledge of photography and my never-ending curiosity about the phenomenon of daylight.

My thesis supervisor at the KADK has been pivotal in my development so far. In our conversations, he gave me an understanding of my subject matter and inspired my fundamental engagement with the phenomenon of daylight. As a teacher myself, I bring this experience with me. Based on a strong belief that everyone has unique potential, I try to motivate students to find their particular focus, and to make them flourish, both personally and professionally.

Winning the International VELUX Award spurred me on; the acknowledgement that other people could follow my ideas and thoughts has had tremendous impact on my career path. It brought me into close contact with the international community of architects, including many people who have remained in my network and continue to inspire my work.

A school of architecture should be a place for developing your artistic talent, and for experimenting with projects, some of which might fail – but failures tend to be a valuable source of learning. We should take care that architectural education remains open and experimental, rather than being too specifically targeted towards future applications. On the other hand, the interaction between studies and practice, for instance through internships during your studies, is highly valuable and formed a very important part of my formation as an architect.

For the last couple of years, we have seen a preoccupation with speed and efficiency in our profession. Now I see the tide turning again, with an increased awareness of quality and innovation, as well as a concern for resources, the environment and people's lives in the way we build new buildings or transform existing ones. I hope to be able to continue contributing to this development through my research on daylight, creating new knowledge and passing this on to the next generation of architects. Part of the research in my Ph.D. project has recently formed the basis of a semester course at the Aarhus School of Architecture, and together with two colleagues, we have extended this to a four-semester course on daylight. I think this kind of research-based teaching moves things forward as it provides students with qualified knowledge and useful tools to work with daylight in architecture."



QUOTE BY **GE MEN** PHOTOGRAPHY BY **RICHARD BARNES**

MAYBE

SOCIAL SCIENCES
SHOULD PLAY
A MORE
IMPORTANT ROLE
IN OUR EDUCATION.

GE MEN

2006

ROYAL DANISH ACADEMY OF FINE ARTS, SCHOOLS OF ARCHITECTURE, DESIGN AND CONSERVATION (KADK), COPENHAGEN

PETER THULE KRISTENSEN

Peter Thule Kristensen, Ph. D., is Head of the School of Architecture at the Royal Danish Academy of Fine Arts (KADK). He has worked as an architect since 1994, in his own architectural practice and elsewhere, and has been a professor at the Institute for History and Theory of Architecture of the KADK since 2004. Peter Thule Kristensen has published several books on various themes, including the works of the Danish 19th-century architect Gottlieb Bindesbøll and 20th-century architects such as Arne Jacobsen and Rudolf Schwarz.

Throughout history, a good architect has been characterised by his or her ability to combine many different contexts in a spatial, meaningful totality; a totality that both meets a number of practical requirements and also enables us to grasp the world that we are in. But in contrast to the Renaissance's Uomo Universale, modern day architects can no longer be expected to have a thorough knowledge of all relevant contexts. The challenge for them is, therefore, to maintain the ability to think in a holistic manner, while at the same time sharpen their particular competences.

At KADK's School of Architecture we believe that the students become better at thinking in a holistic way if they have the opportunity to work in depth with a defined subject or artistic approach during their studies. Therefore, we work with a broad, holistically-oriented Bachelor education and more specialised Master programmes that strongly connect research and artistic development. The focused programmes also help our students attain a differentiated profile and thereby a competitive advantage in a labour market that has become increasingly global and requires ever more specialisation.

A good example is our new master programme, Architectural Lighting Design, in which we will educate both industrial designers and architects, and thereby bring their specific design competences together. This is the first education of its kind in our world; previously it was left to engineers to calculate light exclusively on the basis of rational premises. In other words, we educate a new type of 'lighting architect' who is capable of combining an aesthetic approach with engineering ability.

The integration of art, science, and practice that we seek to achieve in our courses is also reflected by our teaching staff. The many practising architects and designers who teach at the KADK collaborate closely with researchers within a field of scientific and artistic development. In this relationship, it is important that their domains are not simply mixed, but rather that they enrich and inspire each other with their differences, and that their teaching is based on a considered combination of knowledge transfer, design studios and 'hands-on' workshop experience.

KADK's School of Architecture is based on a Beaux-Arts tradition, in which the concept of architecture as an art form that appeals to all of our senses is central. And, in my opinion, there is absolutely no reason for the artistic approach to be introverted. We must respond to modern-day issues that impact on society – for example, the unavoidable challenge of sustainability. This means that students must participate in social and cultural debates, read texts and make use of scientific methods in their research, without neglecting a recognition inherent in art – namely, that there are no definitive answers or unambiguous questions.

IN A VERY REAL WAY, WE CANNOT BE WITHOUT WHATEVER IT IS THAT THE SUN GIVES US. HOWEVER, IT IS ALSO IMPORTANT TO CONSIDER WHAT IT IS THAT WE GIVE THE SUN IN RETURN.

Craig Dykers

QUOTE BY **HYUN SEO** PHOTOGRAPHY BY **ANOTHERMOUNTAINMAN**

ARCHITECTS ARE OFTEN REQUIRED TO DEFINE PROBLEMS AND RAISE THE RIGHT QUESTIONS BEFORE THEY CAN LOOK FOR SOLUTIONS.

2008

CORNELL UNIVERSITY, ITHACA

REILLY HOGAN

Reilly Hogan, 1st prize winner in the International VELUX Award 2008, is an Associate Principal at KPF, Kohn Pedersen Fox Associates in New York City, where he has been employed for the last five years. In his first year after graduation, he was a Teaching Associate in the Department of Architecture at Cornell University teaching design studio. As a senior designer at KPF, Reilly Hogan primarily works with commercial, residential and retail projects in the United States, Canada and China.

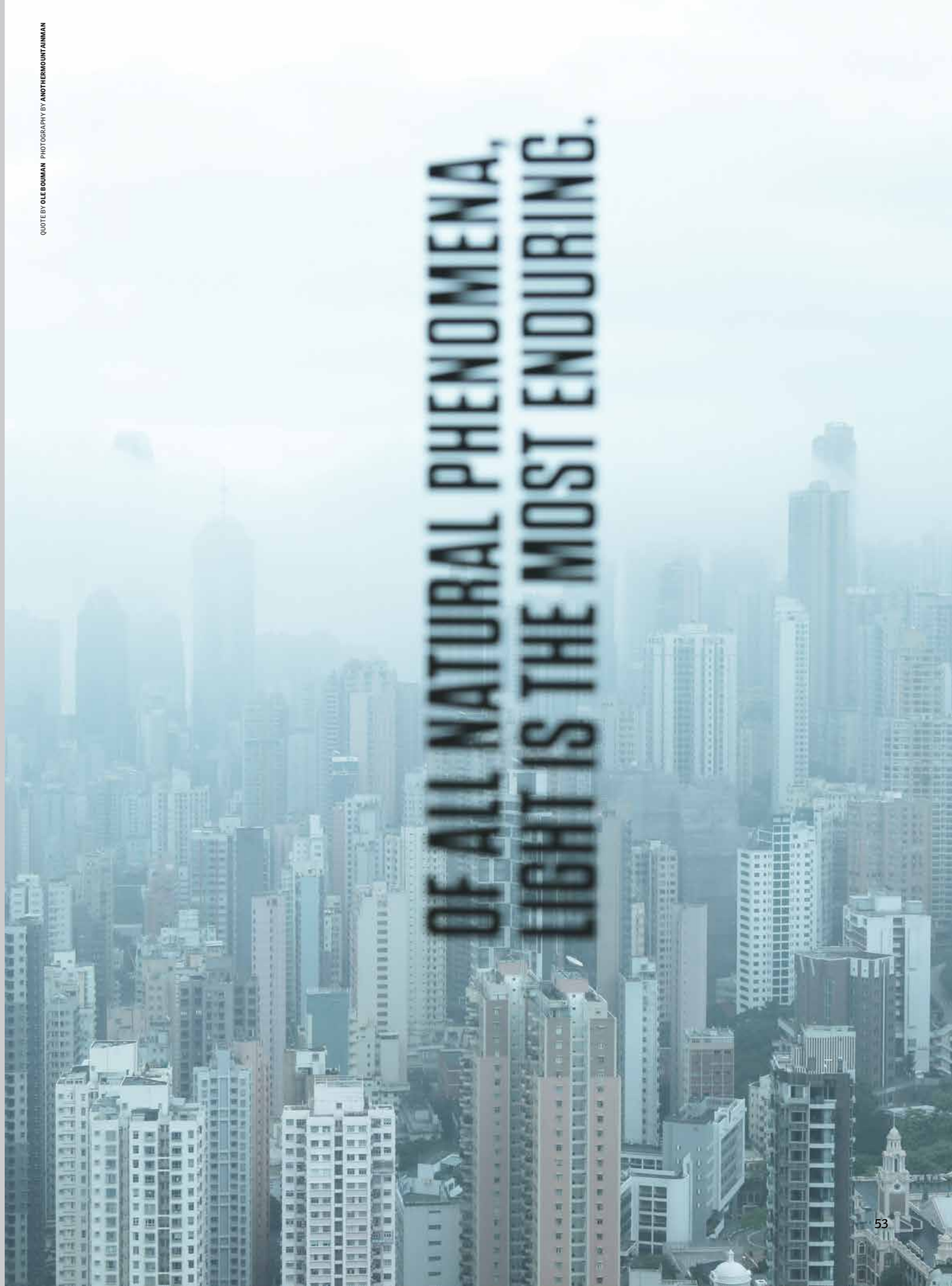
"While studying at Cornell University, I got the chance to take part in a design studio in New York City. Having grown up in San Francisco I love cities, I love New York City, and that is where I am now, working at one of the big architectural practices with projects around the world. I am where I always wanted to be, working on a variety of projects with many design opportunities and always learning more about the process and practice of architecture.

Cornell design studios taught me a diverse way of thinking of design; the critics there encouraged constant creativity and exploration. I learned how to construct an argument, how to present and visualise, and how to marry the two together. What we didn't learn so much about was working with a client, dealing with the fact that the client's priorities and processes are often different from those of the architect. A basic understanding of budgets and of financing might have been useful. And then, on the other hand, the money focus tends to become more and more predominant in our society. I fear that the aesthetic appreciation of good design is endangered, with the arts and aesthetic programmes often being reduced in early education.

It was always a great inspiration to me when my teachers were excited about design, encouraging me to explore new ideas and challenge the norms. Architectural studies have so many facets. The good teacher is able to weave all these facets into a whole; daylight being one of them. Daylight plays a large part in the design projects I do at KPF, from the major public spaces of retail concourses, office lobbies, and even the small entry foyers of residential units. Through my work I have gained a much deeper understanding of how glass interacts with daylight, how the quality of light can be changed, using coatings and filters to achieve different light levels..

My greatest experiences of light, however, come from nature; like the sculpted slot canyons in Utah, where one ray of sunshine, just one, suddenly appears in otherwise complete darkness, beautifully illuminating and colouring the space. Experiences like this are great sources of inspiration for my work.

Winning the International VELUX Award was a source of pride and gave me confidence in my design abilities. It was a great stepping stone in my aspirations to be a design leader. In my current role as Associate Principal, I am building my skills, leading projects and working in teams. I would love to do more cultural, public buildings – a museum, an art gallery, or a train station would be fantastic. Places where the programme is more open and where the function of the building interplays with the building design. I look forward to one day having more design autonomy and the ability to independently express my creativity through my work."



QUOTE BY **OLE BOUMAN** PHOTOGRAPHY BY **ANOTHERMOUNTAINMAN**

2010

HANYANG UNIVERSITY, SEOUL

YOUNG GOOK PARK, WON ILL KIM, DAE HYUN KIM, JIN KYU CHOI

Young Gook Park and **Won Ill Kim** run their own design studio MiYongSil where they work with everything from architectural design to interior design and furniture design. Their projects are located in Seoul and typically deal with reusing old spaces. They recently published a book called Urban Living Room, in which they seek out leftover spaces in the city and explore how you can enjoy the urban environment like your own living room.
Dae Hyun Kim is employed at Mass Studies, a leading Koreanarchitecture firm in Seoul.
Jin Kyu Choi was previously a partner in MiYongSil but is now working as an independent designer in furniture design.
Together, **Young Gook Park, Won Ill Kim, Dae Hyun Kim** and **Jin Kyu Choi** won the first prize in the International VELUX Award 2010.

"The era of big scale of big scale development is over in Seoul. So we are interested in small-scale projects that focus on repairing and reforming old spaces and structures for new uses. We are keen on experimenting with materials, spaces and entire buildings, while at the same time appreciating that we still have a lot to learn and that we are still in the process of reaching our goals.

The most useful things we learnt at school were to look at, interpret and understand space. As a student, it is very important that you establish your own point of view. This requires considerable discussion about the values and abilities of architecture. Through these discussions, and through sharing our thoughts with our professors and fellow students, we learnt a lot – not only about design but also about how to develop our own philosophy as architects and designers. Whilst studying, it is important that diverse aspects of architecture are pointed out to you, so that you and your fellow students can find your own approach to the subject. In this context, teachers should always be alert to new ideas and to trends in society that create the context for the students' work.

Taking part in competitions is also a good way of sharing your thoughts and comparing your skills with those of others. Winning the International VELUX Award gave us the confidence to believe in our ideas, to take the next step in our careers and even publish our thoughts.

We are very interested in the concept of 'social architecture' and would like to create spaces for people where today there are only dead spaces. For example, building a small storage shed or flower bed that could be shared among neighbours instead of a solid brick wall. By opening up and greening the dead spaces, we create better living environments and opportunities for human interaction.

Renovation and remodelling is a big issue in Seoul due to issues of environmental sustainability and economic downturn. All this requires a new understanding of old structures, a new approach to design and a different set of design tools. Through our practice, we are part of this process of rethinking. Daylight plays a special role in all of this, especially when you live in a city with tall buildings all around that cast large shadows on their environment and rob people of much of that daylight.

A good idea is crucial when it comes to design, but the idea really only gets you half way; discovering how to make your ideas reality is just as important. A lot of things need to be considered in the process – such as design, budget, timeline, details and production. Practising as an architect requires a great deal of know-how that we can only gain through experience. "

COURTESY JIXUN SEO PHOTOGRAPHY BY ANOTHERMOUNTAINMAN

WORKING WITH DAYLIGHT IS WRITTEN INTO THE DNA OF OUR PROFESSION.

QUOTE BY **GLENN MURCOTT** PHOTOGRAPHY BY **ANOTHERMOUNTAINMAN**

2010

HANYANG UNIVERSITY, SEOUL

HYUN SEO

Hyun Seo is Head of the School of Architecture at Hanyang University in Seoul, where he teaches architectural design and theory. He received his Bachelor and Master degrees from Seoul National University and then went on to pursue his graduate studies at Columbia University in New York, USA. Hyun Seo is the author of various books such as Explaining Architecture (1998) and Creation and Evolution of Korean Traditional Architecture (2012; both in Korean language)

"Nowadays, architects have to be both designers and implementers of projects. The scope of their work ranges from programing computer software to dealing with legal requirements, and managing design teams to overseeing the actual construction of buildings.

This wide range of tasks means that architects are often required to define problems and raise the right questions before they can look for solutions. In our school, we encourage students to embark on this exercise of defining problems. Unlike in mathematics, there isn't usually a 'right' or 'wrong' answer to architectural problems. We therefore teach our students to find satisfactory, rather than 'correct', solutions to the problems they find. This involves eternal compromise and a constant search for alternatives.

Student competitions are an intriguing opportunity for students to see how other people think and work, and what answers they provide to a given problem. If a student is lucky enough to win an award for his project, and sees that others – including the competition jury – appreciate his way of working, this is obviously an additional benefit. We therefore encourage students to participate in competitions whenever possible.

Most importantly, however, I think it is not sufficient to train architecture students merely to be building designers. As long as architectural education only aims at building design, it will fail. Architecture students should be trained to become leaders who can manage any kind of team or project regardless of the subject that it deals with. This is all the more important when only a limited number of our students actually pursue a career in the field of architecture after graduating. Acknowledging that college education must prepare students for life rather than for a specific career, we encourage students to find their own way to be leaders in whatever profession they end up in. "

QUOTE BY **KARL OTTO ELLEFSEN** | PHOTOGRAPHY BY **FERIT KUYAS**

2012

SWISS FEDERAL INSTITUTE OF TECHNOLOGY (ETH), ZÜRICH

BO LI, GE MEN

Bo Li has just finished his Master thesis and is now working part time as teaching assistant at the Swiss Federal Institute of Technology in Zürich (ETHZ). He also writes articles for professional architectural magazines.
Ge Men is founding partner of Fangan Architekten, a small architectural office in Switzerland. The company undertakes renovation projects, designs single-family homes and offers design assistance to projects in China.
Together, **Bo Li** and **Ge Men** won the first prize in the International VELUX Award 2012.

"As we are just starting our careers, we are in the process of learning by doing. We are getting valuable experience with the realisation of projects now that we have completed school. We are learning the ways of the construction site and how to manage projects with many different stakeholders. If architecture stays on paper, it is only an idea. We are therefore eager to learn much more about the realisation of projects in the real world.

In our education, this kind of practical knowledge did not play such a central role. On the other hand, our studies allowed us to be 100 percent idealistic, and idealism is the source of passion. The education system seems like a pyramid, where we spend most of the time on building design, a little less time on the urban context and just a little time on philosophical and conceptual thinking. Maybe more focus on philosophical and conceptual thinking could have brought us further allowing us to work with more abstract concepts, playing with light, aimlessly touching materials, piling objects – more like art school maybe. It is while you are at school you can do this, whereas in real life we are building for specific clients, specific programmes and specific budgets.

The challenges for architecture are very different in developed and developing countries. We are both doing projects in Switzerland and in China, and can see the differences. In China, it is more about quantity and speed. In Switzerland, there is room for quality, and you can take your time to design and build. Learning from both worlds is highly valuable for us.

Working in different locations also teaches us that light is not just light. In Switzerland, the sun is celebrated, brought directly into people's homes; in the south of China, people tend to avoid the sun, the buildings are more closed, shielding people from light and heat. Even within Europe we see great differences in the approach to sunlight from north to south. Daylight and sunlight carry a lot of cultural meaning.

Our dream is not only to design buildings but to improve people's lives. The world is moving in one direction, becoming more abstract and loaded with information. People are moving from reality into virtuality. The same goes for architecture. Looking into the future, people may be living their entire lives inside buildings without contact to the outdoors. As architects, we have to relate to this development.

Our dreams for the future? Building is a keyword. Building our experience. Building our portfolio. Building for people. Right now Switzerland is a good place for us to be, but with contact to the rest of the world, not least China, our home country."

WHEN YOU DO A COMPETITION LIKE THIS, YOU DO SOMETHING THAT HAS THE POTENTIAL TO SHIFT YOUR WORLD.

Peter Stutchbury

QUOTE BY **HANI RASHID** PHOTOGRAPHY BY **FERIT KUYAS**

LIGHT IS A METAPHYSICAL INSTRUMENT, IT'S A TOOL OF EXPRESSION, IT'S A WAY TO UNDERSTAND FORM AND TIME. BY TAPPING THE LIGHT, YOU TAP THE CULTURAL DNA OF A PLACE...

QUOTE BY **HUBERT KLUMPNER** PHOTOGRAPHY BY **FERIT KUYAS**

MÄRGPLATZ →
ZAHNRADSTRASSE →
← HARDSTRASSE

Arthur Schopenhauer once said that architecture is frozen music. I would add that architecture and urban planning are also frozen politics. With their work, architects translate political and social objectives into physical space, thus giving them concrete form and making them comprehensible.

2012

SWISS FEDERAL INSTITUTE OF TECHNOLOGY (ETH), ZÜRICH

HUBERT KLUMPNER

Hubert Klumpner is head of the department of architecture at the Eidgenössische Technische Hochschule (ETH) in Zurich. He studied architecture and urban planning in Vienna and at Columbia University in New York. In 1998, he and Alfredo Brillembourg established the planning office Urban-Think-Tank in Caracas (Venezuela). Together with Brillembourg, Hubert Klumpner also heads the chair of architecture and urban design at ETH.

"The profession of the architect is becoming more and more complex and academic training in architecture needs to take this into account. In the case of ETH Zurich, this means that, on the one hand, we base our curriculum on the premise of educating architects as generalists and, on the other, that we orientate it towards the needs of society, the economy and politics. We offer a broad-based education that, within a pre-structured learning environment, leaves students the freedom to choose their subjects according to their personal inclinations and talents. In this way, we hope to educate them not only to be highly-skilled professionals but also members of a society that can take responsibility.

As a technically- and scientifically-oriented university, we continue to place great value on teaching the art of constructive thinking and the fundamental principles of building. Today, this can no longer be taken for granted in institutes of higher education where architecture is taught. At the same time, aspiring architects have to develop their position with regard to society as a whole. An architect is not only responsible for maximising a client's profit but is always involved in the development of entire cities, as well as of our building culture. Arthur Schopenhauer once said that architecture is frozen music. I would add that architecture and urban planning are also frozen politics. With their work, architects translate political and social objectives into physical space, thus giving them concrete form and making them comprehensible. In this respect, we architects are faced with an enormous challenge. Accepting it also means that we have to win back some of the influence that, in the last few decades, has been lost to others.

For all this, a course of study at a university can only serve as a basis. At ETH Zurich, we see studying as the starting point of a lifelong learning process that prepares architects to assume responsibility in a democratic society. To do so, apart from consolidated specialist knowledge, one needs communicative intelligence, the ability to work in a team and a certain amount of assertiveness.

In order to prepare our students for this role, we regularly appoint professors who, in their own work, exemplify this "communicator function" to good effect. In addition, we actively offer students opportunities for interdisciplinary learning. An interdisciplinary approach is becoming more and more important in professional practice and we cannot leave it up to students to learn about it on their own during their studies.

This also applies to the topic of daylighting. Working with this resource is written into the DNA of our profession. At ETH, especially in the individual design studios, it has been a central theme up to now. However, I felt that it would be useful to work with scientists and industry in order to develop formats with which we could anchor daylighting design in the curriculum even more visibly. This could assume many forms – for example, a visiting professor or special design seminars. In my opinion, this would be highly beneficial, above all in the more advanced semesters."

QUOTE BY **BOLI GEMEN** PHOTOGRAPHY BY **FERIT KUYAS**

IMAGE BY **HYUN SEO** · PHOTOGRAPHY BY **FERIT KUYAS**

2012

SWISS FEDERAL INSTITUTE OF TECHNOLOGY (ETH), ZÜRICH

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Luka Piškorec is a Research Assistant at the Department of Architecture and Digital Fabrication of the ETH Zürich, and was tutor of Bo Li and Ge Men for their winning design in the International VELUX Award 2012. He studied architecture at the University of Zagreb and worked in architectural offices in Croatia and Switzerland prior to pursuing his Master studies at the ETH, which he finished in 2011.

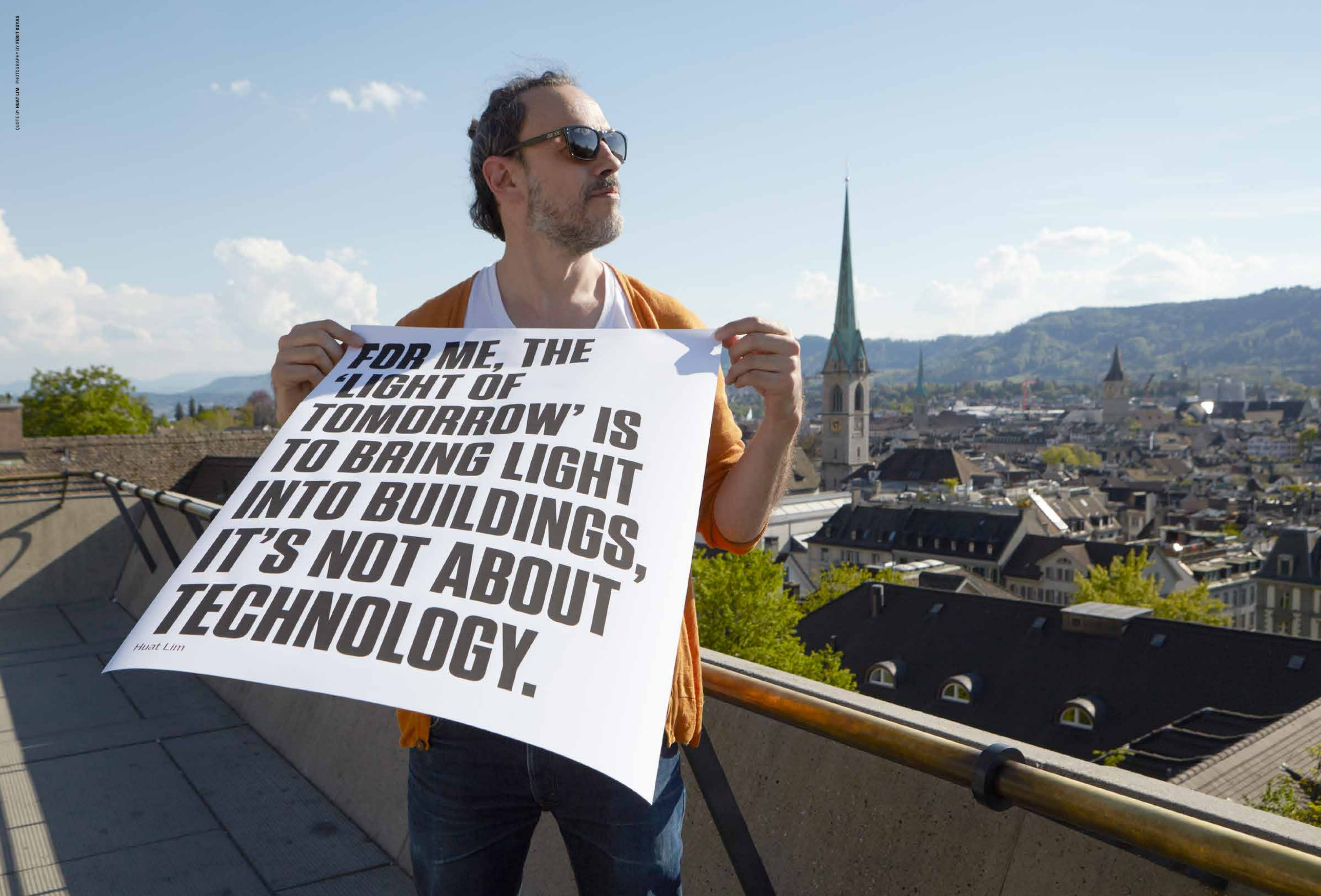
"Architects today should try to maintain the role as generalists that they have always played in history. This requires them to acquaint themselves with a broad range of skills from all areas of human cultural endeavor, especially, but not only, the creation of architecture. Technology plays an important role here since it permeates all parts of our culture, as well as the construction industry. Taking a pro-active approach to technology puts the architect in a leading position and allows him to define the rules of the game. Unfortunately, architects are usually the last to adopt new technologies, which leaves them with only a subordinate role in comparison to other engineers. Changing this attitude will enable us to assert ourselves as a driving force in technological innovation, something we have to strive for from the earliest days of our architectural education.

In my view, the role of architects in our society is rather schizophrenic. On the one hand, we try to please our clients and meet their needs. On the other, there is the expectation that architects should work in the interest of society as a whole. Negotiating between these two requirements is one of the most important tasks of any architect, and students ought to be prepared for it in academia.

A third aspect of architectural education is the increasing international interconnection between both students and architects. It is hard to 'sell' just anything to students these days: they communicate more than ever, they are well-informed and react to the lack or 'censoring' of information. This puts a lot of pressure on the mentors and architects involved in teaching, as they have to continuously keep up to date with things happening in the architectural world. But it will eventually drive the discipline forward, as the quality of education will have to live up to global standards, and even smaller schools can reach global standards in a short time.

Student competitions play a vital role in architectural education, and I would encourage any student to participate in them. After all, at the beginning of an architect's professional life, there are basically only two ways of obtaining work and distinguishing oneself – direct contracts and architectural competitions. Since the first are much less common, young architects are often left with no other choice but to participate in competitions. Furthermore, I see competitions as a sort of series of questions asked by society, to which architects must respond. And only the architect who has something to say, comment or ask is competent to fulfill the second role mentioned above – to work in the interest of society. This culture of assuming the role of a 'commentator' who answers questions arising from society through architectural competitions should be nurtured in education from the very beginning."

QUOTE BY **HUAT LIM** | PHOTOGRAPHY BY **FERIT KUYAS**



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THE DEBATE CONTINUES!

Dear Reader of Daylight/Architecture,

Schools of architecture worldwide educate competent candidates who can hopefully fulfil everyone's hopes for a satisfying and sustainable future in their future careers. This makes architectural education the quintessential factor in shaping our built environment; it was in the past and it will continue to be so in the future.

We would like to invite you to take up the baton of a debate that is being started in issue 21 of Daylight/Architecture. Feel free to join us under www.thedaylightsite.com/the-future-is-light and #futureislight.

Here are some initial questions for your inspiration:
What are your top priorities and key advice for future generations of architects and other 'game-changers' of the built environment? And how do you see the awareness of natural resources – including sunlight and daylight – in the architectural education and profession today?

Yours sincerely,
The VELUX Group.

WHEREAS THE SHAPE AND FORM WERE THE MAIN THEMES OF ARCHITECTURE IN THE 20TH CENTURY, THE FOCUS HAS NOW MOVED TO THE PHENOMENA, AND LIGHT CAN BE THE MAIN THEME OF TODAY. KENGO KUMA

WORKING WITH DAYLIGHT IS WRITTEN INTO THE DNA OF OUR PROFESSION. VELUX® HUBERT KLUMPNER

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