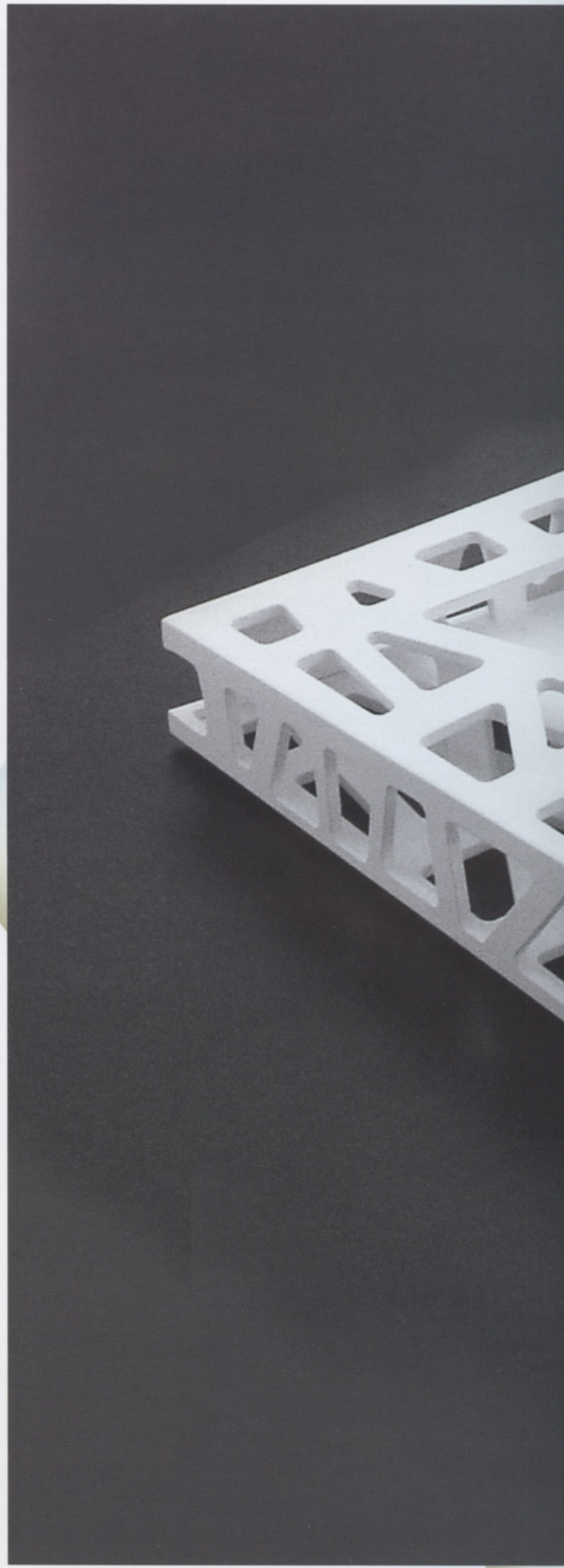
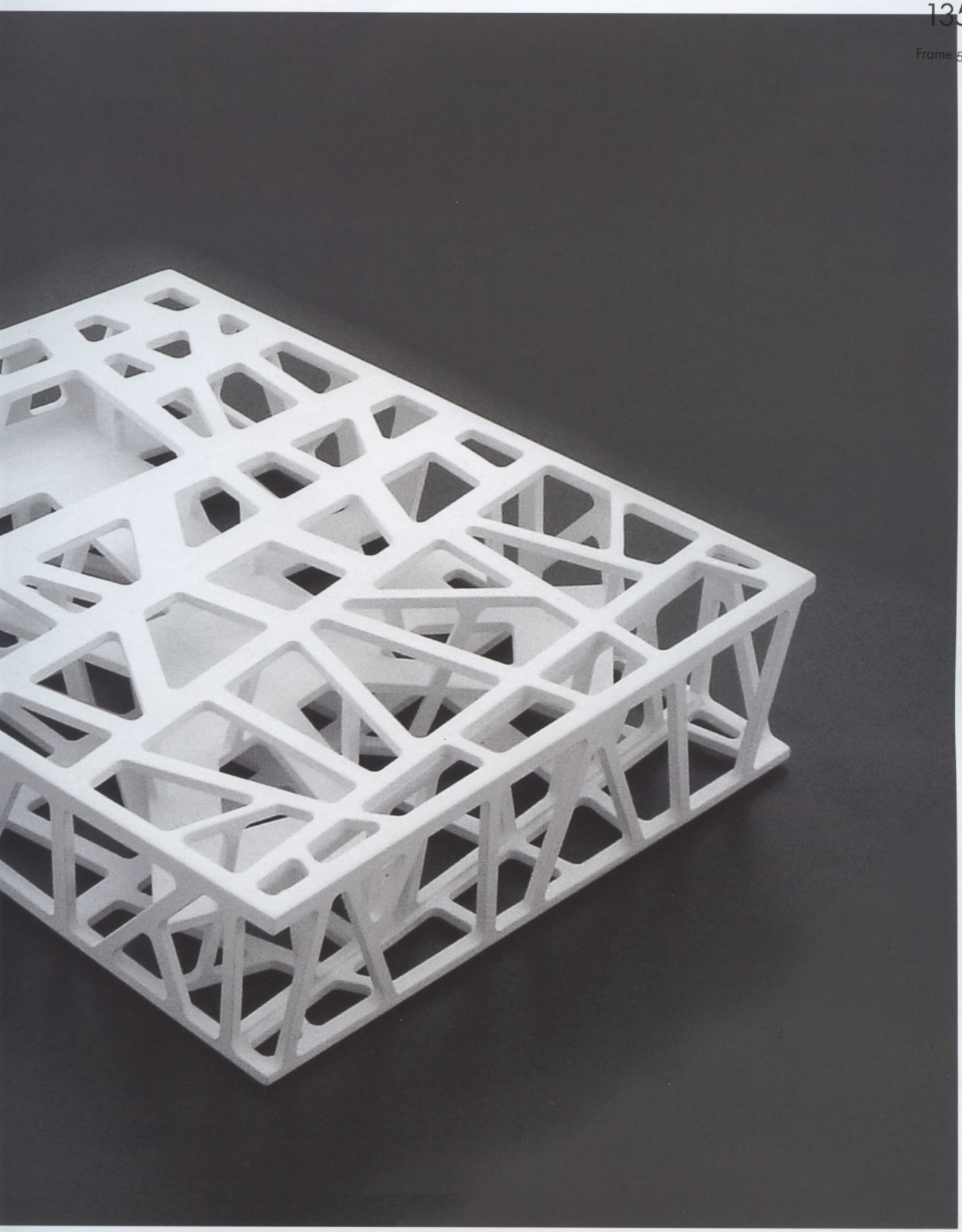
Dinner for 500

With a new dining hall for a campus in Karlsruhe, J. Mayer H. Architects creates a stage on which scale, materials and even Nutella play starring roles.

Words Kimberly Bradley
Photos David Franck



The 11-m-tall building occupies a central site bordered by the three schools that share the Karlsruhe campus. Large expanses of fenestration draw the surroundings indoors.



Nutellagram: a schematic model explaining the structure of the building. Comparing it to a Nutella sandwich, Mayer H. explains how the elastic strands of filling act when the two halves are pulled apart. The model is now part of the permanent collection of the Museum of Modern Art in New York City.

At the edge of the Hardtwald, a forest near the city of Karlsruhe in the southern German state of Baden-Württemberg, a greenish-ivory building rests gently on the grounds of an otherwise nondescript university campus. The alien presence looks like an organic sculpture made of high-tech plastic. Or an outsize piece of modernist furniture. Think of the base of Eero Saarinen's Tulip chair and magnify it tenfold.

Enter one of the structure's rhomboid doors, however, and several clues – like long, horizontal rows of food-service tables – make it clear that this is a public building. Since going into operation on March 1, Mensa Karlsruhe – the campus refectory – has become a social fulcrum for students attending the three institutions that share it: Karlsruhe University of Applied Science, Karlsruhe Art Academy and Karlsruhe Pedagogical College. Inside, amidst a quiet cacophony of pale-green tones, diagonal and upright columns connecting floor to ceiling gently segue into ceiling beams or a staircase that leads to the gallery dining area. Vast windows interrupted by what architect Jürgen Mayer H. calls 'barcode-like' vertical dividers on the façade allow interior planes and angles to echo the shapes of foliage visible outside. Openness to the outdoors joins theatrical verticality to evoke the feeling of sitting in a modernist stage set.

The alien presence looks like an organic sculpture made of high-tech plastic

An arcade extends along one side of the building. Splayed columns conjure up the image of a ballet dancer performing a plié, says Mayer H.

Initially, the web of curves and angles is not easy to understand. People often interpret the design in personal ways, according to the Berlin-based architect, whose office has accompanied the building's conception and construction – only its second major realized design – since 2004. Mayer H. has also worked as a visual artist, exploring and extrapolating upon the hidden patterns in, for example, data-protection designs found inside bank envelopes. His cryptic numerical wall installations can be found at the MoMA in San Francisco and the MagnusMüller Gallery in Berlin. He's also experimented with high-tech materials, such as thermosensitive paints, that permit human and object to interface, sometimes quite intimately. (This author rather embarrassingly made the architect's acquaintance after sitting on his Heat.Seat and leaving a bottom-print behind.) 'They read texts or see hidden messages in the columns,' he continues. 'They see my involvement with patterns. But what I like is that the structure is based upon more than one idea.'

The first important concept is that the building's interior porosity and large windows make it difficult for users to discern boundaries. 'When you're inside, you can look through the layers of columns, but the trees outside continue this idea. They become part of the building,' says the architect. The second, more playful idea dates to autumn of 2003 and the team's first brainstorming session. The design was to be submitted to an open competition, and the building's 2,000-m2 footprint was a given. The architects turned their attention to the

Cross sections through the building.

View from the gallery towards the entrance below. The railing is made of green-tinted glass set into olive-coloured steel.

The building is like a sandwich thickly spread with a sticky filling. 'We call it the Nutellagram'
Jürgen Mayer H.

The dining area, which seats 500. To the left is a laminated-timber stairway to the gallery. Columns, ceilings and walls are sprayed with 2 to 3 mm of polyurethane that creates a seamless interior finish.

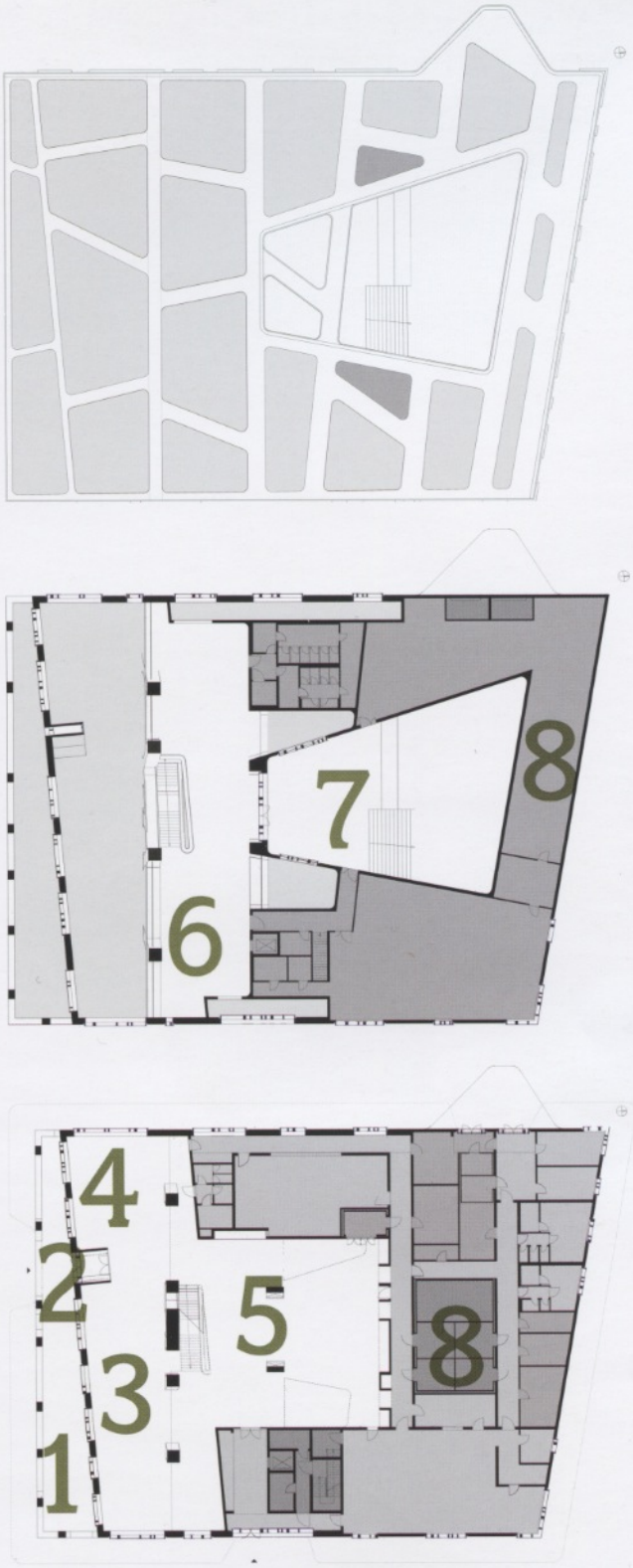
floor and ceiling, initially picturing a sandwich thickly spread with a sticky filling. 'If you put an elastic mass inside two layers and pull it apart, where it's further apart it's thinner, and where it's closer together it's thicker,' says Mayer H., explaining an early set of computer renderings. 'We call it the Nutellagram.'

The sandwich analogy is obvious at the rear of the finished building, which is formed by a squat, 5-m-high volume interrupted by a few trapezoidal windows. This single-storey section contains the building's administrative and utilitarian facilities. Designed by kitchen engineer Martin Scherer, storage, cooking, serving and cleaning areas are an efficient, well-oiled machine. But as the roof slants up towards the front façade, the 'elastic mass' rises and pulls inside and out, culminating in an 11-m-high forest of columns and filaments. An additional row of irregularly angled supports forms an outdoor arcade and terrace.

Students not dining at tables on curry-coloured chairs (both by local manufacturer Kleinkopf) can sit at a long coffee bar on Pouf 01 stools by Quinze & Milan. Inside, a stair leads to the upper gallery, where views and openings continue the concept of porosity: students here can overlook the main hall and the scene outdoors, or pass through a curved-cornered exit to a roof terrace, essentially a cutout in the roof. Along the gallery's mint-green rear wall, a curvy cutout allows a look down to the front cooking and serving area. Throughout the building, simple rod lighting is set flush into overhead beams, as well as along staircases and diagonal columns. Railings feature olive-coloured steel and green-tinted glass. It is in these public spaces that the building's experimentation with scale becomes obvious: some corners feel calm and intimate, others vast and dramatic. Shadows cast by supports create games of light that are both comforting and slightly unsettling. Mayer H. muses on an evening in which he sat watching the subtle interior colours play off one another at dusk. 'It was like the sun, in turquoises, yellows and beigey-greens.' And when it is illuminated at night, the Mensa is like a megawatt lamp lighting up the campus.

'Some people read texts or see hidden messages in the columns' Jürgen Mayer H.

The major challenge in creating the structure was financial – overshooting the project's state-funded budget of 7.2 million euros was not an option. Here, however, monetary limits led to material and aesthetic innovation. 'We checked how much the structure would cost made from concrete, from steel, and from wood,' says project manager Andre Santer. 'Steel would have blown the budget. Wood was by far the least expensive and least problematic.' In researching how wood could fulfil a Nutella-inspired vision, the team came up with a novel idea. The main structure was built primarily with laminated timber, then sprayed – inside and out – with 2 to 3 mm of a polyurethane normally used for sealing submarines or bridge structures. 'It's like a neoprene swimsuit,' says project architect Sebastian Finckh. 'It's



Plan of the ground, upper and roof levels of the 2355-m2 student dining hall in Karlsruhe, designed by J. Mayer H.

1. Veranda
2. Entrance
3. Dining hall
4. Café
5. Food
6. Dining gallery
7. Roof terrace
8. Ancillary spaces

J. Mayer H.
Refectory
Karlsruhe

'What I like is the play with dimensions and "offscale" space'

Jürgen Mayer H.

Rod lighting is set flush into overhead beams, staircases and diagonal columns. The original design had skylights, which were omitted for budgetary reasons.

on the roof, ceilings, walls, everything.' The skin unifies interior and exterior nearly seamlessly. The sole place the coating wasn't used was the outdoor terrace, which is done in bangkirai wood. Budget and materials also influenced furniture decisions: tables and chairs were chosen for their low price and practicality. What's more, the chairs are easy to lift onto tables for cleaning, and the polyurethane skin of the Pouf 01 stools echoes the building's unique sheath. 'It's not *totally* designed, however,' notes Mayer H, who thinks that dishes, cutlery and trays were just taken from the old cafeteria.

Illuminated at night, the Mensa is like a megawatt lamp lighting up the campus

The young diners are enthusiastic, as is the university's student union, which values the building's efficiency as well as the cachet of having something cool on campus, but the canteen has been criticized by a few old-school architects and critics for its unorthodox use of materials. 'The building forces most "real" architects to rethink what architecture is. To them, this is fake architecture. They have no other criteria to express architecture than to show how a building is built. They don't talk about atmosphere,' explains Mayer H. Another, admittedly logistic, problem is that students stay longer than they're supposed to – the cafeteria serves approximately 1800 meals a day but has only 500 seats, necessitating several turnovers. The schools are considering shifting schedules around to avoid a short period of crowding that occurs at about 1 p.m.

Going back to possible first impressions, I'm thinking the architect's approach to form and scale could be a cross-reference to varying activities in architecture, art and furniture. The office has been working on tiled seats with Italian mosaic firm Bisazza – again using patterns based on data-protection designs. And perhaps seeing the Mensa as a sculpture isn't so far off: a model of the project was added to the MoMA's permanent collection in 2005. 'What I like is the play with dimensions and "offscale" space,' says Mayer H., speaking not only of this building but also of five other major projects presently under construction throughout Europe. 'We discover something in one scale in furniture, and we apply it at a different scale in a building or an urban-planning scheme.' The rhythm of the canteen's columns, for example, is essentially the data-protection theme blown up and given a third dimension. This is the kind of interplay that fulfils one of the architect's goals for the people using his creations. 'If something isn't easily understandable, it remains a secret. You have to look twice to appreciate it,' he says, explaining his desire to evoke curiosity that goes beyond predictable reaction, to deconstruct the obvious, and to offer a kind of stage where the actors are the action. Even in a campus cafeteria.

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The polyurethane coating on all surfaces ensures easy long-term maintenance. Repainting is needed only every 20 years. It also provides an easy-to-clean surface for a building in which food is served.

Beige Is Better Than White

Jürgen Mayer H. and Marc Kushner

'In architecture, colour's always an issue. From historically, morally, politically and hygienically correct colours to the highly charged whiteness of modernism, colour has polarized architects for centuries. Colours create atmosphere and support or replace decoration and ornament. In contrast, white is seen as the sum of all colours or the non-colour *par excellence*. White functions as an argument against the impure context and content of a building. Only the natural look of materials seems to escape the colour dilemma. But there's a colour that's natural, pleasant, non-disturbing – and not white. Off-white and beige are invisible colours in terms of being not discussed, of being given rather than chosen. We're interested in looking behind the seemingly innocent surface of beige and its spatial possibilities.'