The Kunsthall Rotterdam built in 1992 was designed by architect Rem Koolhaas and the Office for Metropolitan Architecture (OMA). The building hosts 3000 square meters of exhibition space, an auditorium, a book shop, and a restaurant. The exhibition areas include two large, and two smaller galleries that can be used together or separately. Its location situates it as the gateway to Rotterdam’s cultural amenities (OMA Website).

The Kunsthall was built as an investment in Rotterdam’s cultural capital to stimulate tourism. The city is now one of the cultural hubs of The Netherlands. Since destruction during World War II the city has undergone infrastructure, economic and cultural regeneration. In the 1990’s the city developed “clusters” in telecommunication, and audio-visual services, and design and media, striving to develop an image as a cultural city. Rotterdam has a rich history of culture, and wanted to promote it as cultural tourism. What Rotterdam was missing to succeed this goal was an adequate supply of cultural facilities. The Kunsthall was built with the desire for architecture that could draw global attention, and could put Rotterdam on the European Cultural stage.
The modest exterior form of the building says little to reveal the complexities of the building’s interior. During an interview with New York Times Koolhaas said, “I like to do things that on first sight have a degree of simplicity but show their complexity in the way they are used or at second glance,” this is certainly the case for this Rotterdam project.

Kunsthal’s program is contained in a rectangular prism. In plan, the building is a square crosses by two routes, creating four autonomous projects. The Site is slopped, with the approach from the Maasboulevar being six meters higher than the park to the north. A ramp runs north south though the core of the building, connecting the busy Maasboulevard, to the park. This ramp also separates the galleries on the east, from the rest of the program on the west. The driving concept of the design is that of a continuous circuit. A spiral circulation route, enabled by the use of large ramps, connects the public areas of the Kunsthal. The ramps give the building a sense that floors have dropped down and moved up to meet each other.
Some have referred to Kunsthall as a post-modernist project due to the use of the juxtaposition of a range of materials, including black glass, corrugated galvanized metal grills, steel, concrete, stone cladding, and glazing. The material composition of Kunsthall is characterized by a sequence of surprises; Koolhaas takes advantage of the unexpected with material, as well as structure and program to create experiences that are both sacred and profane.

Koolhaas worked with Structural Engineer Cecil Balmond to generate a form that was truly a collaboration of Architecture and Engineering. Balmond does not see a separation between architecture and structure; rather, they are aspects of a unified whole that generate form (Baumeister and Lee). Balmond sought to break out of the dominant order; he said, “Trapped by the Cartesian Cage I wanted to break out ... that opportunity came with Rem Koolhaas and the Kunsthall Rotterdam.” Working together, those two were able to generate the unusual structural building components such as the ramps supported by seemingly unstable angled columns.
Peter Eisenman brings to our attention two opposing concerns with form; the first is a concern for internal composition, the program and how it is organized, and the second is a ‘concern for the articulation of ideal themes in form’ (Eisenman 1968). Eisenman explains that these concerns are two sides of the same coin, the challenge being to work with them together. After the industrial revolution programs became increasingly complex, as a result the type-form relationship shifted. Architects since turning to the simplified doctrine of ‘form follows function.’ Eisenman On the other hand Balmond argues that a form does not stand alone, explaining, a form is ‘almost a product of it’s content’ (Baumeister and Lee).

It would be inaccurate to say Koolhaas formally took a form follows function approach. He started the design with a piece of pure geometry, a square, for the plan. He then added a primary circulation route, that’s open to the public and the outdoors, acting to divide the space into four regions.

If Koolhaas had taken the concept of generating a space with continuous circulation, without the initial plan of a square he may have resulted in an entirely different building. A variety of forms could have developed, to illustrate this I will present an alternative. He could have taken the deign approach that he used but used a different piece of geometry, let’s say an ellipse. He could have included the same and circulation but he would have achieved a very different form, although interestingly a similar profile would have resulted.
In the text “the building in pain Anthony Vidler writes about the history of the body and architecture, establishing three historical periods; the building as body, building as epitomizing bodily states and the environment endowed with body. One can discuss the Kunsthall Rotterdam in light of the first two of these historical periods. First, as Vidler explains, “In vitruvian and renaissance theory, the body is directly projected on to the building.” (Vidler 1990). As though responding directly to Vidler’s historical description, Rem Koolhaas has literally projected the male body onto the Kunsthall Rotterdam. An icon of the male figure is used twice on the building. The first is seen as one approaches the building from afar. The second copy of the same image is located at the entrance, both instances the images is situated beside a set of arrows becoming man to come forward.

The addition graphic representations of the body in the museum are a pair of smiley faces on two panes of glass that appear to overlap, merging to generate an expression that begins to look more like a pig than a human.
The experience of the building starts with the entrance. The graphic on the front door is iconically male; the image speaking to Filaret’s distinction that not only is architecture linked to the human body, it is linked to the male body, “the building is constructed as a simile for the human figure. You see that I have shown you by means of a simile that a building is derived from man…” (Agrest This male graphic is most often seen paired with it counter part the ‘female’ graphic. The female is excluded in its absence. According to Agrest’s logic, when something is excluded something is necessarily included. This has been the case with the history of architecture in which the male body has played a foundational role, while the female body has had no presence. It could be argued that the singular presence of man on the building supports Agrest’s argument that Logocentrism and male anthropomorphism has been the foundational system in architecture since Vitruvius. Since the renaissance any voice that declared that buildings should embrace or embody the female form was not heard. If Leonard Da Vinci ever drew a Vitruvian woman, those drawings were lost, never to make their place in history. Upon mapping circulation around and through the building, a formal similarity to Francesco di Giorgio Martini’s proportioning of a temple design, can be seen.
The Kunsthall also speaks to Vidler’s second historical period – that of the building epitomizing bodily states. Koolhaas truly succeeded in creating a sublime architecture, that evokes terror, fear, and delight. The journey through the building brings on these emotions in pattern. The Kunsthall Rotterdam Koolhaas generates a composition of emotional states, taking the museum’s guest through a physiological journey through the building. This experience starts with the delight of entering the building. There is surprise when one discovers that they enter the museum, at the front of
a theater, and then fear at the realization that the supporting columns look as though they are about to collapse. The experiential journey throughout the building is based on perception and this journey could continue to change depending on the individual. The Kunsthall Rotterdam cannot be experienced purely by sight but must be experienced. It is not summed up purely in the visual but also in material textures, quality of light, and emotional states.
Works Cited


Meleauu-Ponty, “The Synthesis of One’s Own Body” in Phenomenology of Perception

Technique

Rem Koolhaas and Cecil Balmond worked together each bringing their own set of techniques, to the table to produce the Kunsthall Rotterdam. The architect and the engineer, each with their own set of techniques, both approached the projects unconventionally, reimagining normative systems, to produce the unexpected. By paying with people expectations, and producing the unexpected emotional repose to the building and it’s components could be produced. Rem Koolhaas made some formal decisions, deciding to cut the building with both vehicular and pedestrian traffic, and to base the floor plans and circulation on a spiral. Koolhaas played with the unexpected in his use of his program adjacencies, graphics and materials. Cecil Balmond confronted the Cartesian grid and, and created a structure that is “full of staccato and off beat rhythm. Using traditional techniques as a starting point, Balmond was not bound to parallel lines or predictable pattern in this project.
Koolhaas - Circulation

It is most likely that Rem Koolhaas first started his project with a site analysis. The site is situated between the Masboulevard to the south and the Museum Park to the North. A quick site analysis would have revealed that there are two circulation routes that move through the site, a pedestrian path and a vehicular road. Rather than routing these pathways around the museum, Koolhaas decided that the paths could be integrated into the building by going under and...
Bringing external circulation into the building broke the project into four distinct quadrants. To reunify the project, Koohaas designed the circulation to be a spiral. To achieve a spiraling circulation path, the floor plats were first bifurcated and then folded over each other, allowing the floors to continue upwards without division.
Cecil Balmond used a series of axioms to define the logic behind various features of the form and structure, the three axioms that he used were brace, slip, and frame.

Balmond looks to conventional structural strategies as a starting point and then rethinks these strategies to generate compelling results. Within this project he does not take any process for granted and always explores alternative ways of tackling structural problems. By breaking away from standard conventions Balmond has found a way to use structure to trigger emotional responses such as delight, surprises and anxiety.

The columns in the main exhibition space slip passed each other. Originally there were four columns placed on a square, at the intersection point of the structural grid. By allowing the columns to slip past each other the columns still conform to the structural grid while allowing for a more dynamic formal element within the space.

Balmond also rethought the traditional truss by turning it on its side, arguing that it is more visually compelling this way and also that it is arguably stronger.
Balmond enabled Koolhaas’s spiral by moving beyond the strictly horizontal and vertical planes, and bringing in diagonal surfaces. To break the conventional, columns and beam cube he seared the structure, and bifurcated the floor plates, allowing for continuous circulation that spirals upwards. The supporting columns are also angled to counter the shifting weight of the floor plates. Through their use of material and structural techniques Balmond and Koolhaus created a series of emotional responses – that occupants experience as they move through the space. Some of the strategies that they use through placement of unexpected graphics, such as the smiley faces, and the male symbol placed on the roof and at the entrance, through the use of unexpected such as the perforated materials galvanized steel flooring, diagonal floor plates and irregular columns.
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Meleau-Ponty, “The Synthesis of One’s Own Body” in Phenomenology of Perception


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