

UNStudio. "Mercedes-Benz Museum" Reprinted from Log, 2013.

Log

FALL 2013
In Pursuit of
Architecture

29

37° 58' N, 23° 43' E

The Parthenon, Athens

This past May the official unemployment rate in Greece hit a record high of 27.6 percent. In the Peloponnese, the impact of the government's economic austerity program is starkly visible in abandoned building sites and unfinished highways and bridges. Yet in Athens work continues at the Acropolis, where the most recent reconstruction of the Parthenon is now in its 30th year. The long-discussed program, needed to repair damage caused by a restoration completed in 1904, finally began three years after the Parthenon was structurally compromised in an earthquake. The southeast corner was addressed first, where the 55-ton corner column required repositioning and stabilization, one millimeter at a time. Over the years of painstaking labor, stoneworkers have gone without regular paychecks, but work on the symbolic monument and tourist attraction has continued. The current projected completion date? Maybe seven years from now. But given the recursive modern project of restoration, the team of archaeologists, architects, and craftsmen piecing together new and old bits and blocks of marble are making sure their work will be easy to undo.

\$15.00




Mercedes-Benz Museum

Our first design decision for a building to permanently display the vast history and collection of Mercedes-Benz was not to simply design a showroom for cars. We would instead examine and redefine the museum typology in all its facets to provide an experience that far exceeded that of the typical car showroom. Our thought was, if one of the first things one sees upon entering the Museum of Modern Art in New York is a helicopter suspended from the ceiling, then why should the car not also be displayed with the same reverence as a work of art? It was important for the building to incorporate the latest and most innovative sustainable solutions and to respond to its urban, local, and content-related context in one integrated gesture, but most essential was our determination to make the collection of cars the unquestionable hero of the story. This museum would quite literally be designed *around* the objects it was created to display. It would not simply accommodate pedestals, it would be the pedestal.

The Mercedes-Benz collection includes both vehicles and a "legend" that narrates the history of the brand. The design was therefore required to accommodate two separate yet intermingled aspects of the Mercedes-Benz history. It quickly became apparent that while we had begun by expanding upon the way objects are traditionally displayed and perceived in a museum, an equally important concern was to create a spatial organization that guided an unconventional experience of time.

A museum that displays objects in the context of their historical development functions as a time machine. It is not simply information that draws people to a museum of history, but also the desire to be transported back in time through a merging of sensory and cognitive captivation. When it comes to the car – a machine with a past, present, and future – a museum supporting the expanded time span of that story has much to cover if it is to inspire and guide the imagination from visualizing the past to envisioning the future. This meant we needed to create a visitor experience that transcended the modernist linear understanding of time. Instead, we wanted to create a museum that embraced more recent theories, such as string theory, that support ideas of multiple and parallel



CIRCULATION ALONG THE BUILDING
PERIMETER. VIEW TOWARD CONCRETE
"TWIST" AND EXHIBITION SPACE.
PHOTO © DAIMLER AG.

MERCEDES-BENZ MUSEUM
STUTTGART, GERMANY
2001–2006

ARCHITECT: UNSTUDIO
DESIGN TEAM: BEN VAN BERKEL,
CAROLINE BOS, TOBIAS WALLISSER,
MARCO HEMMERLING, HANNES
PFAU, WOUTER DE JONGE,
ARJAN DINGSTÉ, GÖTZ PETER
FELDMANN, BJÖRN RIMNER,
SEBASTIAN SCHAEFFER, ANDREAS
BOGENSCHÜTZ, ULI HORNER,
IVONNE SCHICKLER, DENNIS RUARUS,
ERWIN HORSTMANSHOF, DERRICK
DIPOREDJO, NANANG SANTOSO,
ROBERT BRIKNER, ALEXANDER JUNG,
MATTHEW JOHNSTON, ROMBOUT
LOMAN, ARJAN VAN DER BLIEK,
FABIAN EVERS, NUNO ALMEIDA, GER
GIJZEN, TJAGO NUNES, BOUDEWIJN
ROSMAN, ERGIAN ALBERG, GREGOR
KAHLAU, MIKE HERUD, THOMAS
KLEIN, SIMON STREIT, TAEHOON
OH, JENNY WEISS, PHILIPP DURY,
CARIN LAMM, ANNA CARLQUIST, JAN
DEBELIUS, DANIEL KALANI, EVERT
KLINKENBERG

REALIZATION: WENZEL + WENZEL;
EXHIBITION CONCEPT AND DESIGN:
HG MERZ; INTERIOR ARCHITECTURE:
CONCRETE ARCHITECTURAL
ASSOCIATES; SPECIAL ELEMENTS:
INSIDE OUTSIDE - PETRA BLAISSE;
STRUCTURE: WERNER SOBEK
INGENIEURE; GEOMETRY: ARNOLD
WALZ; CLIMATE ENGINEERING:
TRANSOLAR; COST ESTIMATION:
NANNA FÜTTERER; INFRASTRUCTURE:
DAVID JOHNSTON, ARUP, LONDON

CLIENT: DAIMLERCHRYSLER
IMMOBILIEN

UNSTUDIO, FOUNDED IN 1988 BY BEN
VAN BERKEL AND CAROLINE BOS,
HAS OFFICES IN AMSTERDAM AND
SHANGHAI.

times – theories that suggest that we exist, in effect, in numerous different times and spaces simultaneously. This idea captivated us and drove us to find design solutions that, through architecture, would simulate sensations of transcending time and space as the visitor moved through the museum's two interlaced chronologies.

The initial attempt to assimilate these concepts resulted in a simple trefoil diagram: a continuous line that, if you draw your pen along it, moves forward in time while simultaneously repeating itself. Each layer of repetition represents perpetual motion – as the line never comes to an end, the space it defines can potentially be repeated infinitely. In physical concept models, these lines turned into surfaces that stacked to create a double-helix organization of three leaf-shaped plateaus around a triangular void. This was a breakthrough moment. The double-helix DNA structure that evolved from these studies not only symbolically encapsulated the hereditary effects of the past on the future, but additionally offered the perfect solution to incorporate this concept into the infrastructure and double circulation system of the museum.

In the geometrical study models that followed we further developed the idea of the endless line becoming a single surface – one that could integrate infrastructure, organization, and load bearing while providing generous open exhibition spaces for the two strands of the collection. It was at this stage that the “twist” elements and ramps were introduced. Structurally, the twist is a transformative element that originates as a box girder fastened to a core in the center of the building and extends outward to the facade. The introduction of these as key load-bearing structures made it possible to create exhibition levels spanning more than 100 feet without intermediate columns. The actual twist occurs where the ceilings of the legend rooms turn into walls while simultaneously rounding a corner and connecting to adjacent exhibition rooms. The top surface of each twist is used as a circulation ramp between different levels, providing seamless circulation between the staggered gallery plateaus. Additionally, these ramps provide the visitor with an overview of the exhibits as they descend into the exhibition rooms.

The resulting geometry allowed us to be true to our original concept and to design a fully integrated building that displays the collections alongside one another so that the visitor can move at will between the two. So, now that we had the concept down, all we had to do was figure out how to build it.

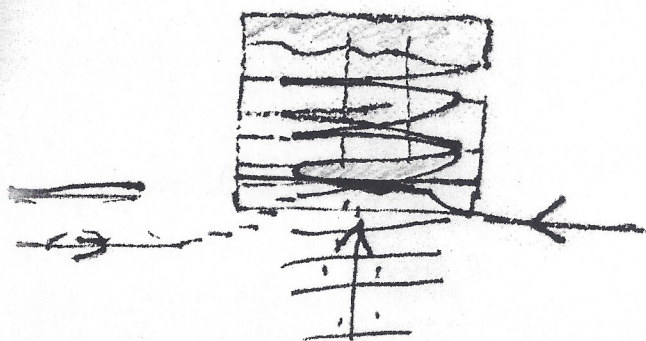
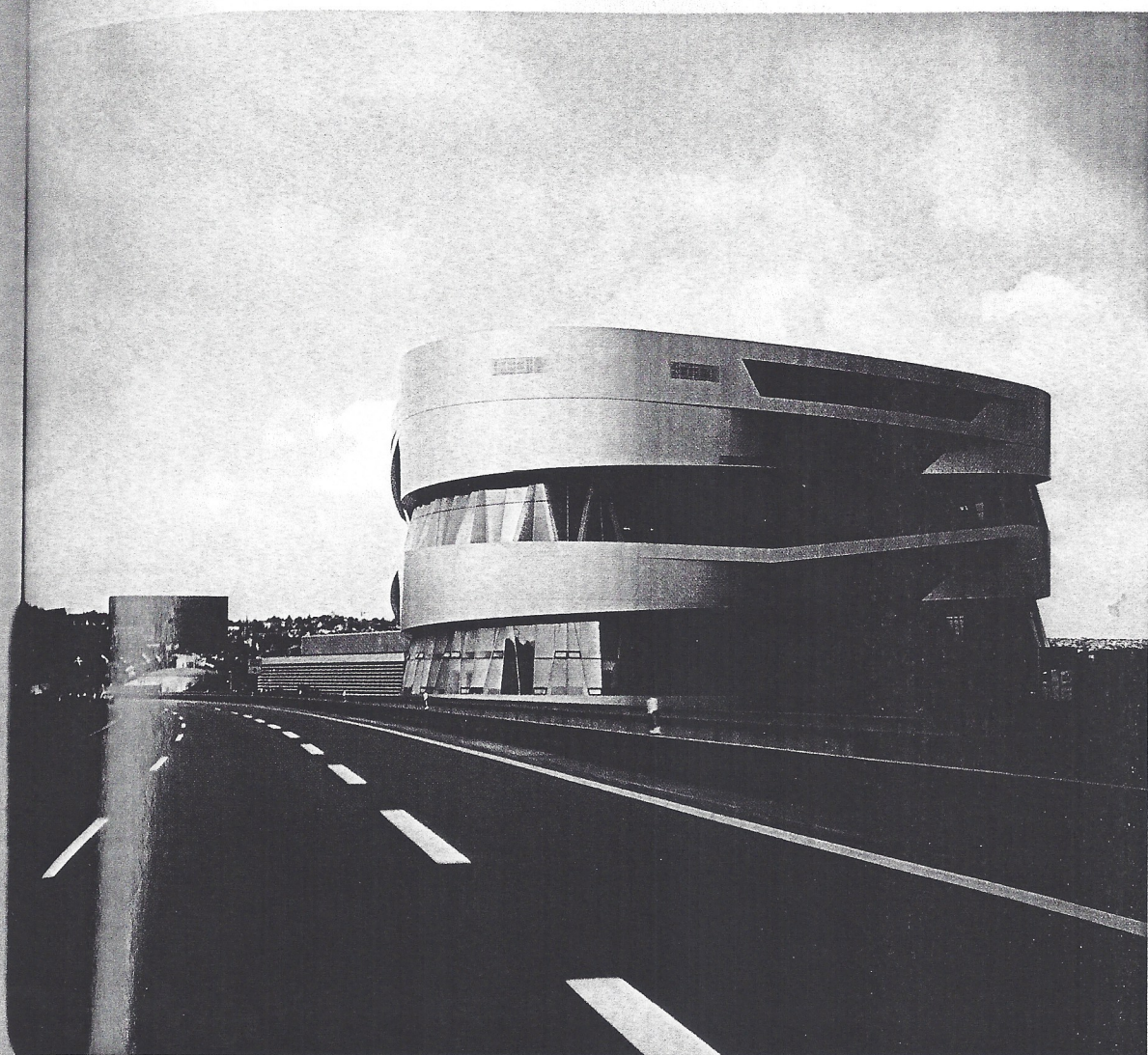
– Ben van Berkel with Karen Murphy

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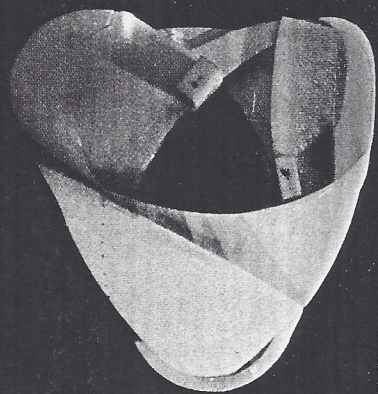
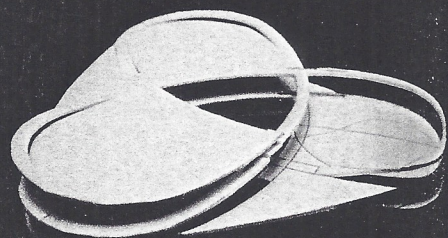
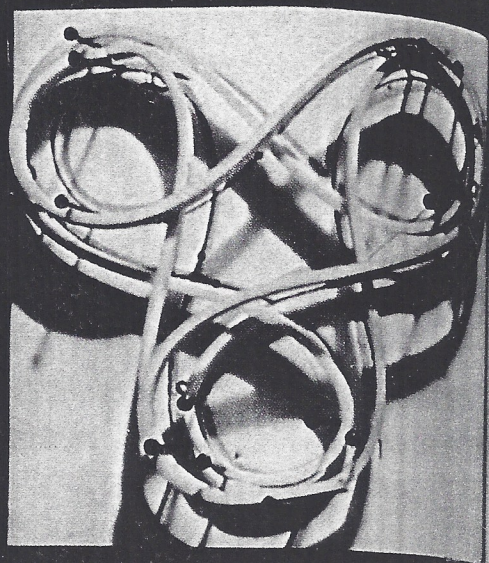
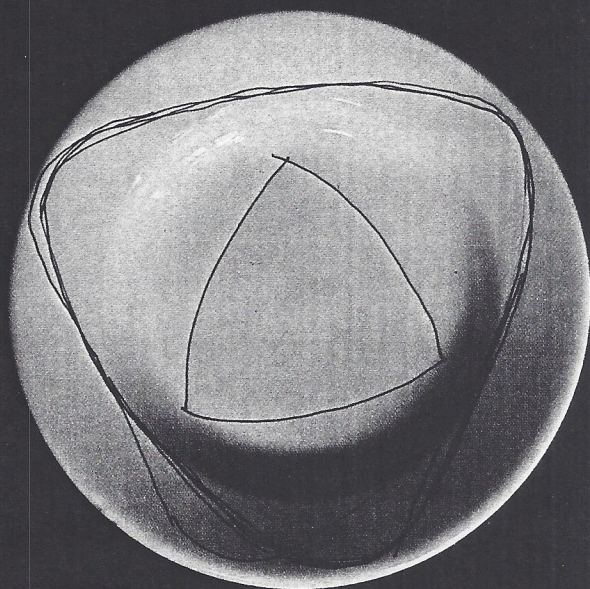
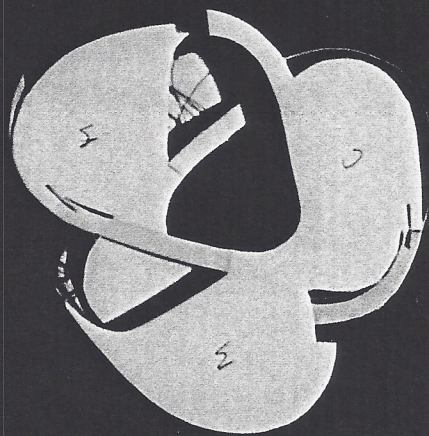
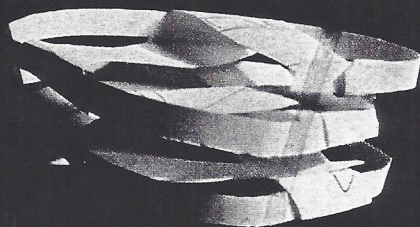
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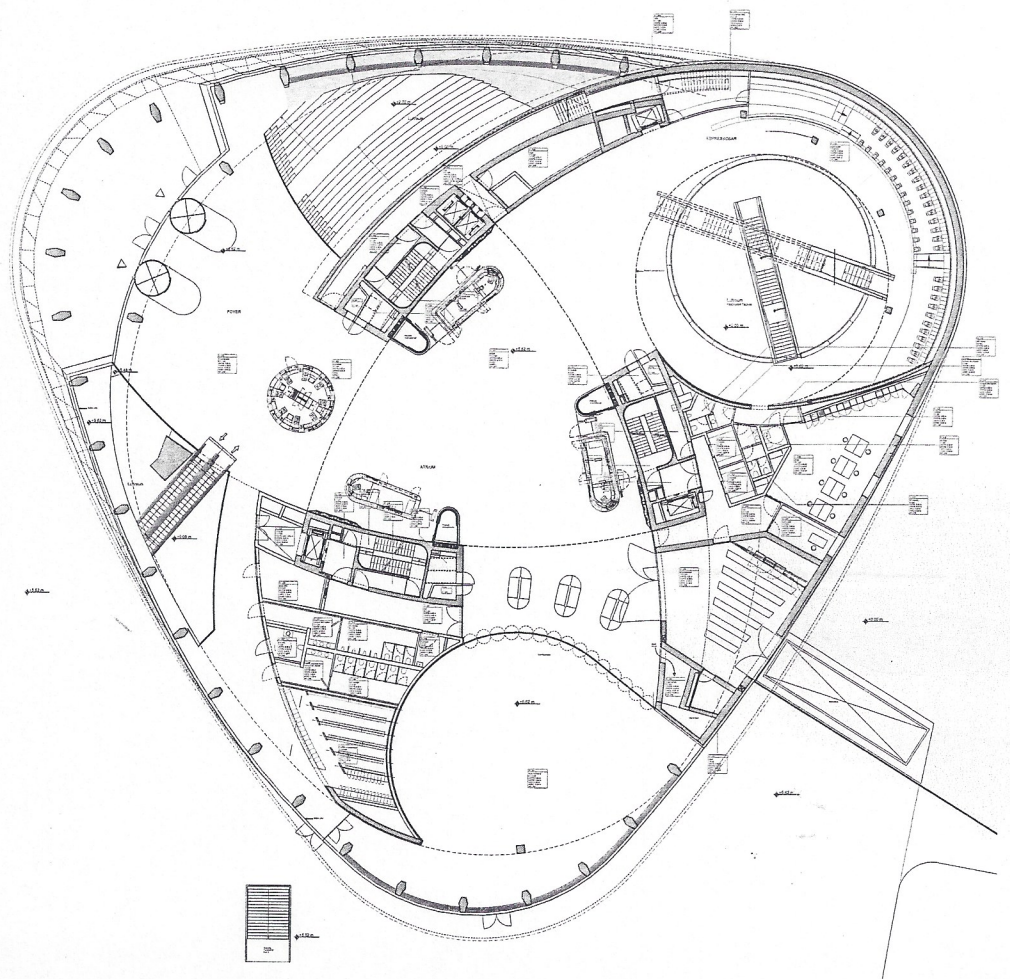
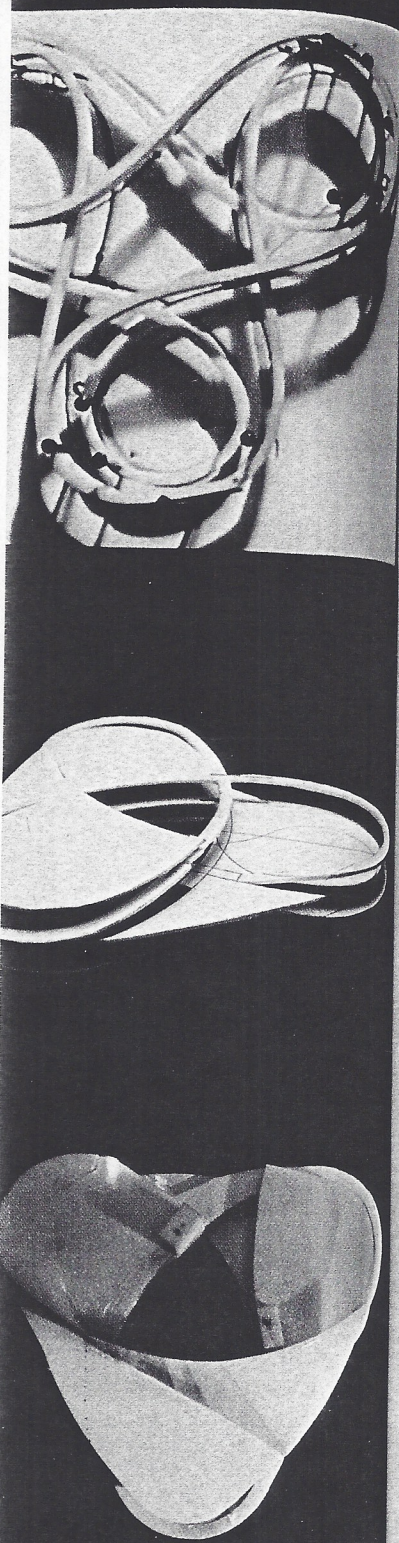
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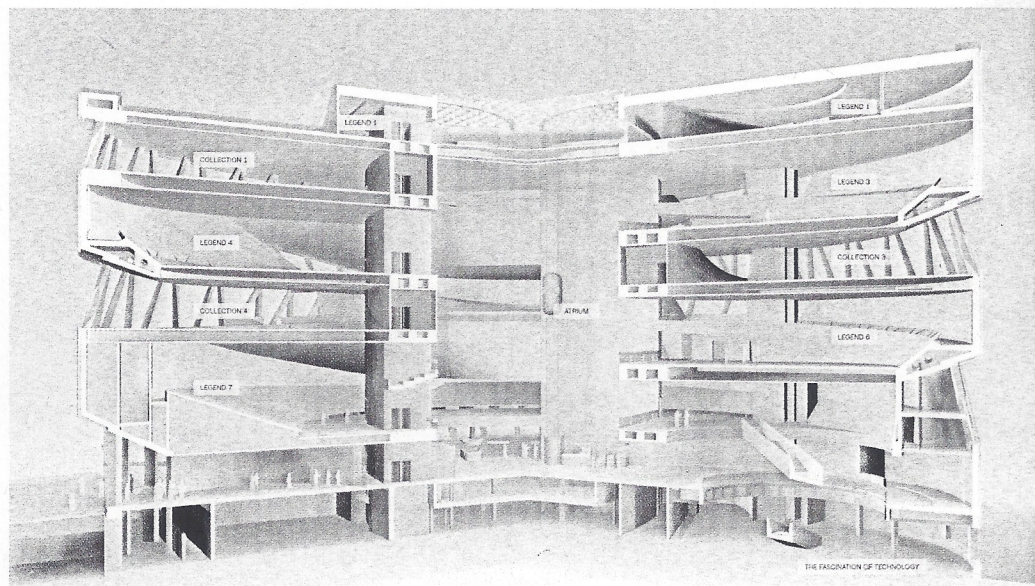
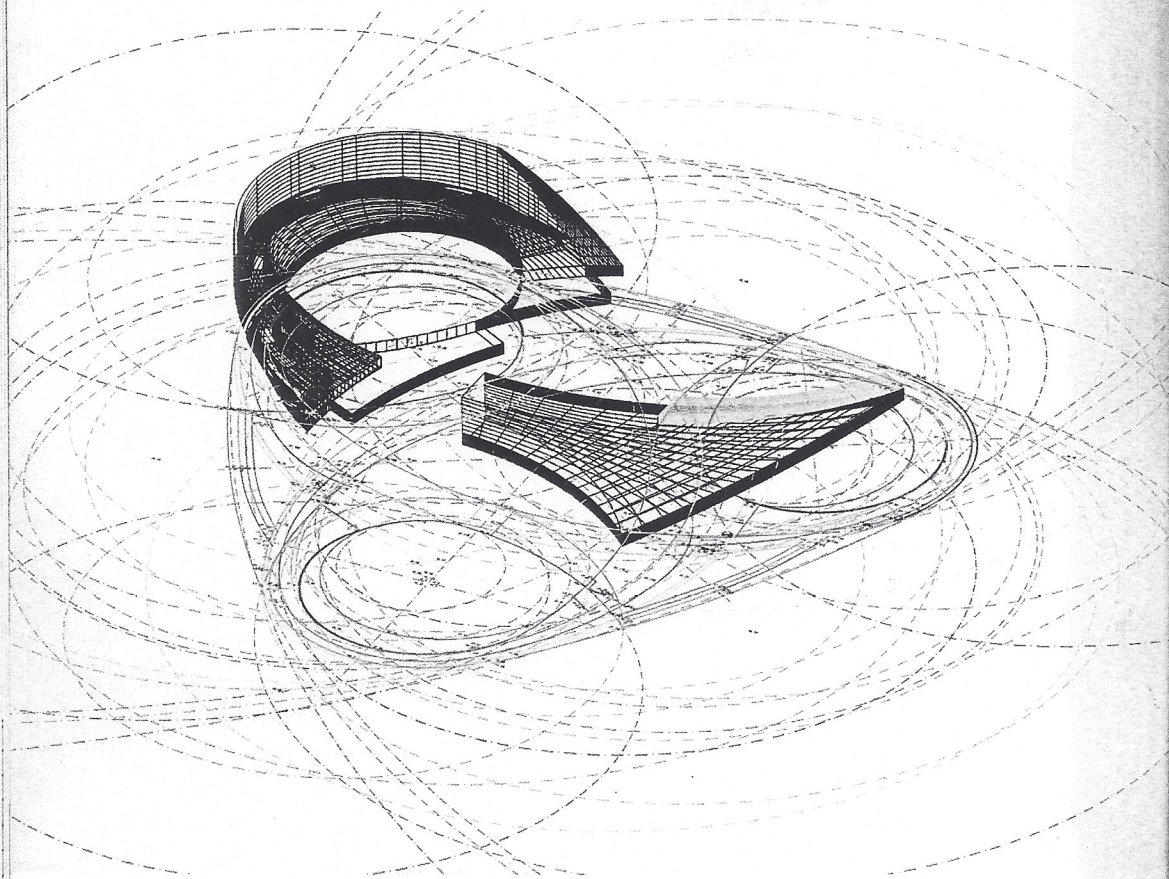


CONCEPTUAL SKETCH OF DOUBLE-HELIX CIRCULATION. TOP: VIEW FROM B14 HIGHWAY APPROACHING FROM THE EAST.
 PHOTO © BRIGIDA GONZALEZ.

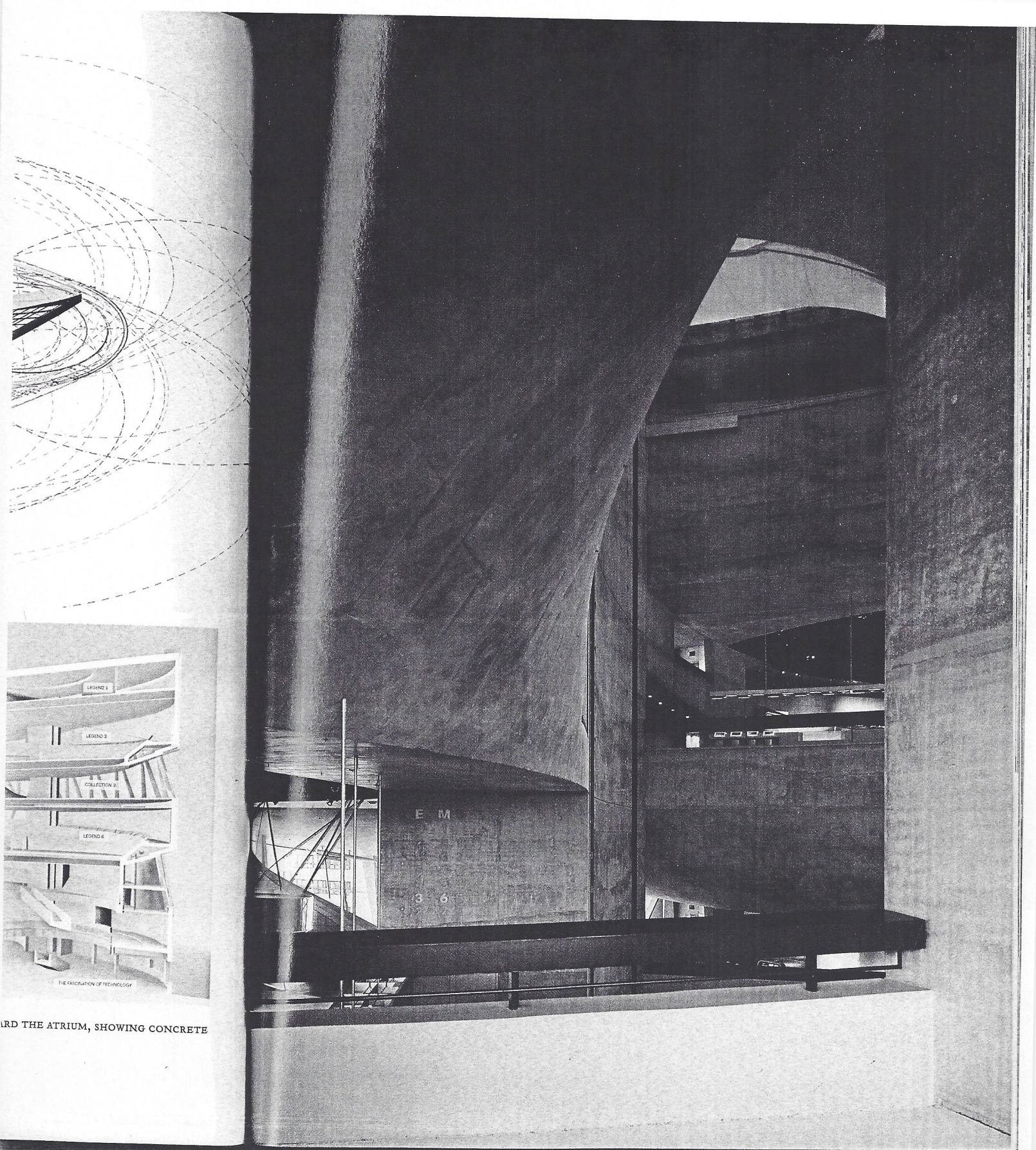




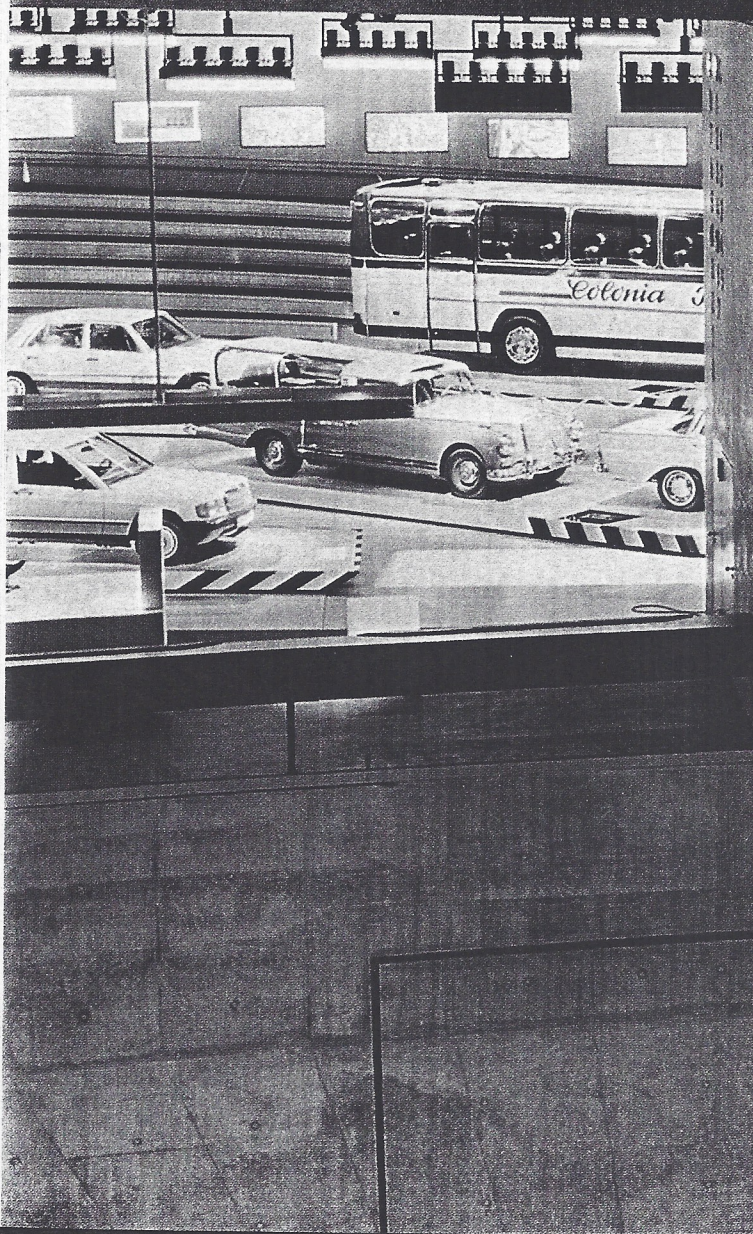
PLAN, LEVEL 1. OPPOSITE PAGE: STUDY MODELS OF THREE-DIMENSIONAL TREFOIL GEOMETRY AND CIRCULATION.

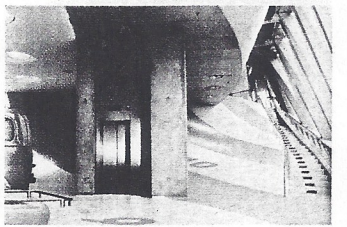
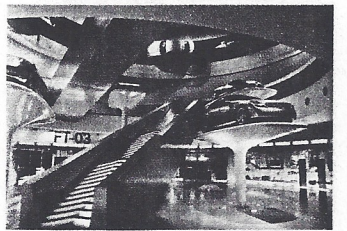
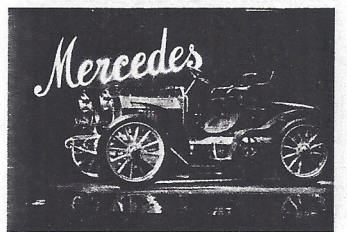
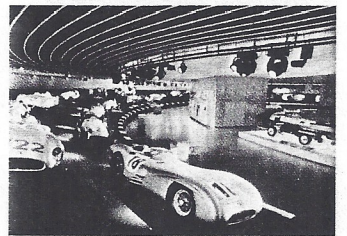
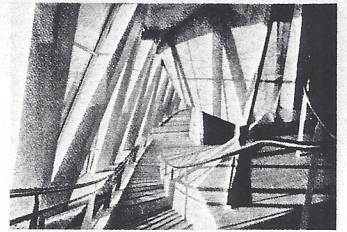
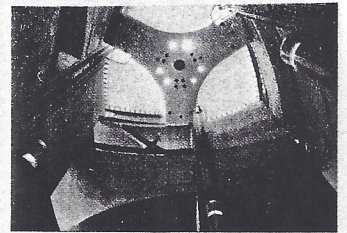
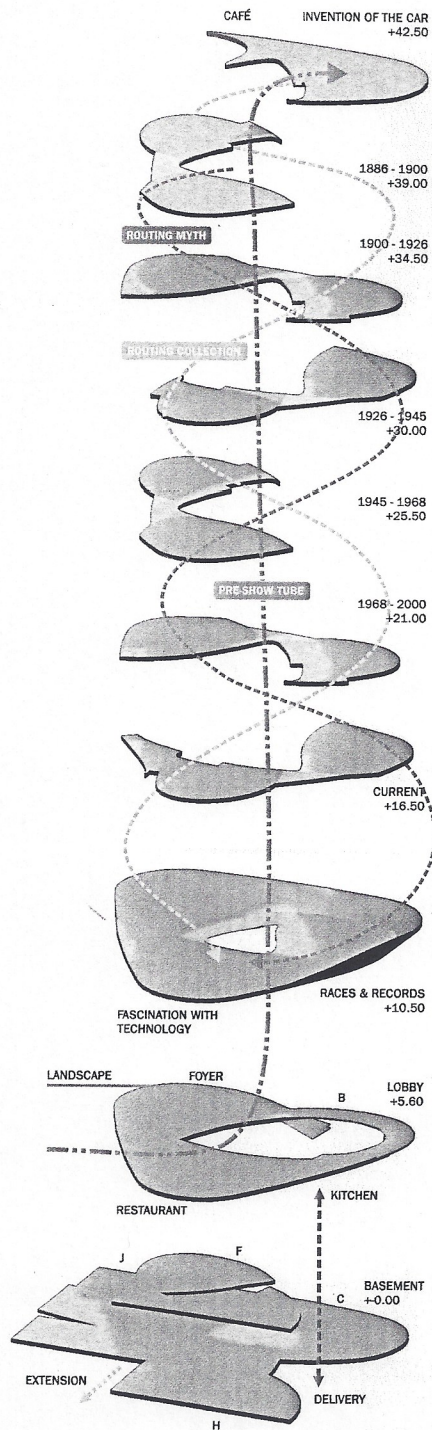


SECTIONAL MODEL. TOP: PARAMETRIC MODEL OF TWIST. OPPOSITE PAGE: VIEW TOWARD THE ATRIUM, SHOWING CONCRETE TWIST. PHOTO © CHRISTIAN RICHTERS.



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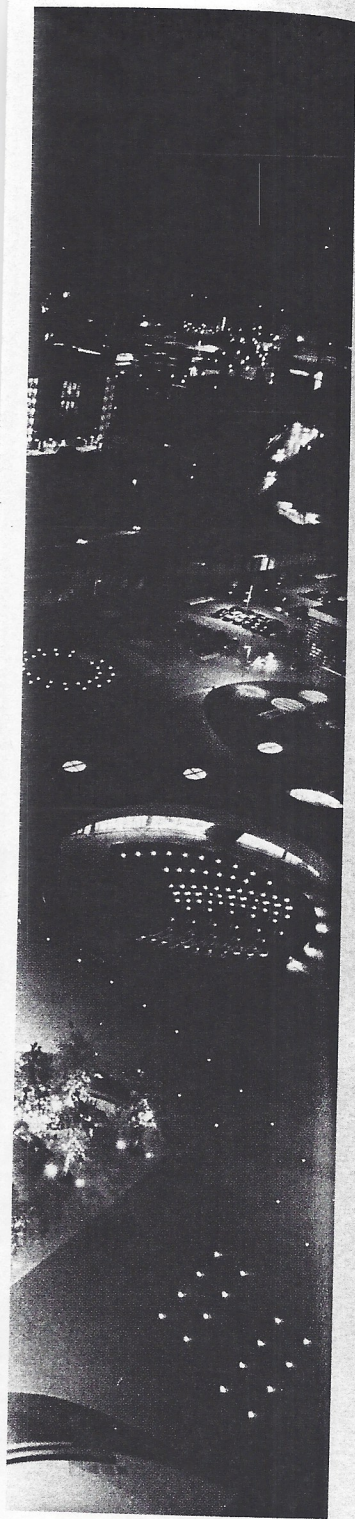




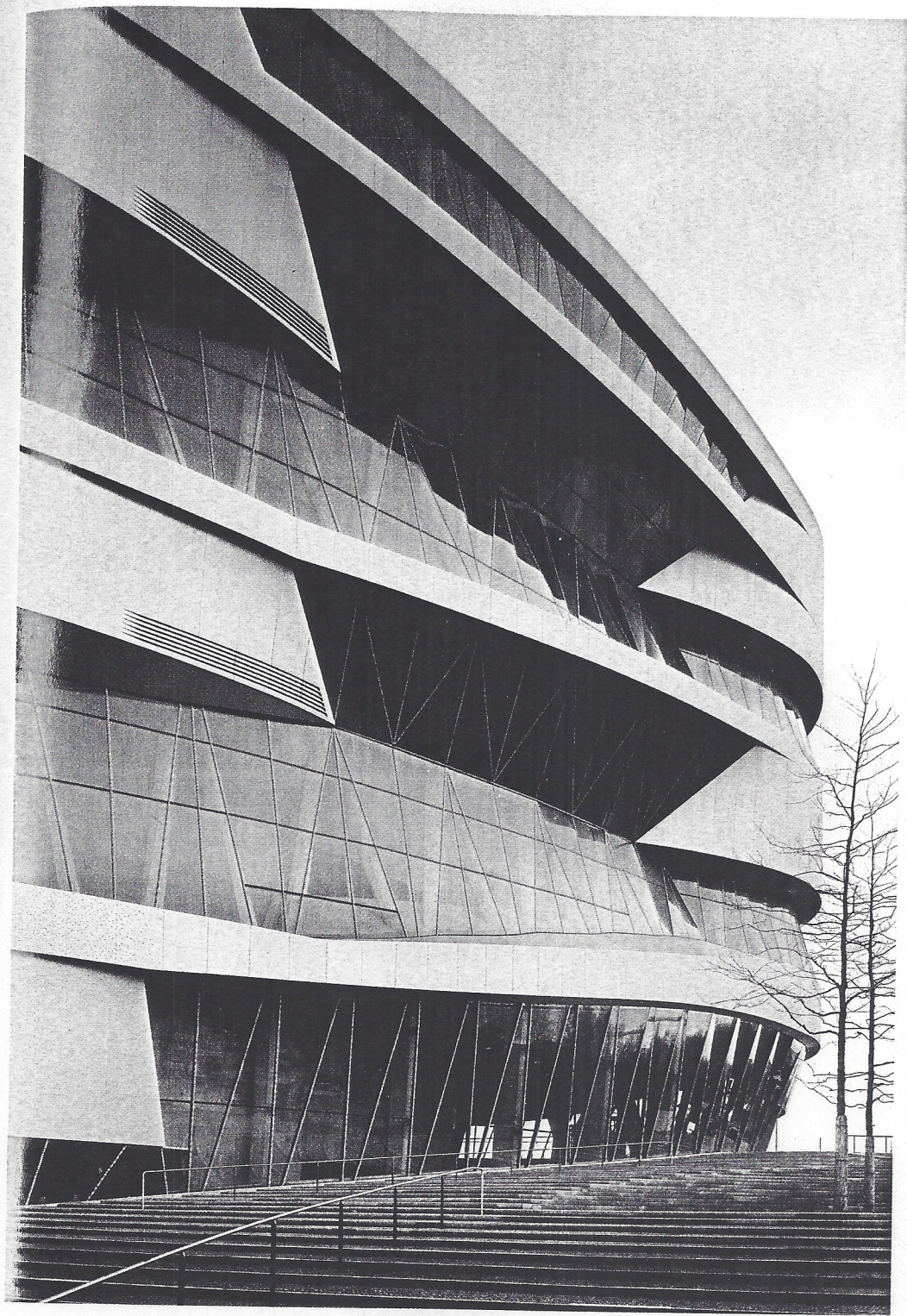
EXPLODED DIAGRAM OF CONTINUOUS CIRCULATION AND EXHIBITION SPACES. RIGHT: EXHIBITION SPACES AND ATRIUM. OPPOSITE PAGE: VIEW ACROSS ATRIUM TOWARD ELEVATOR AND EXHIBITION SPACE. ALL PHOTOS © DAIMLER AG.



AERIAL VIEW OF MUSEUM AND SURROUNDING PLAZA AT NIGHT. PHOTO © DAIMLER AG.



AG.



EAST FACADE SEEN FROM PLAZA. PHOTO © CHRISTIAN RICHTERS.