

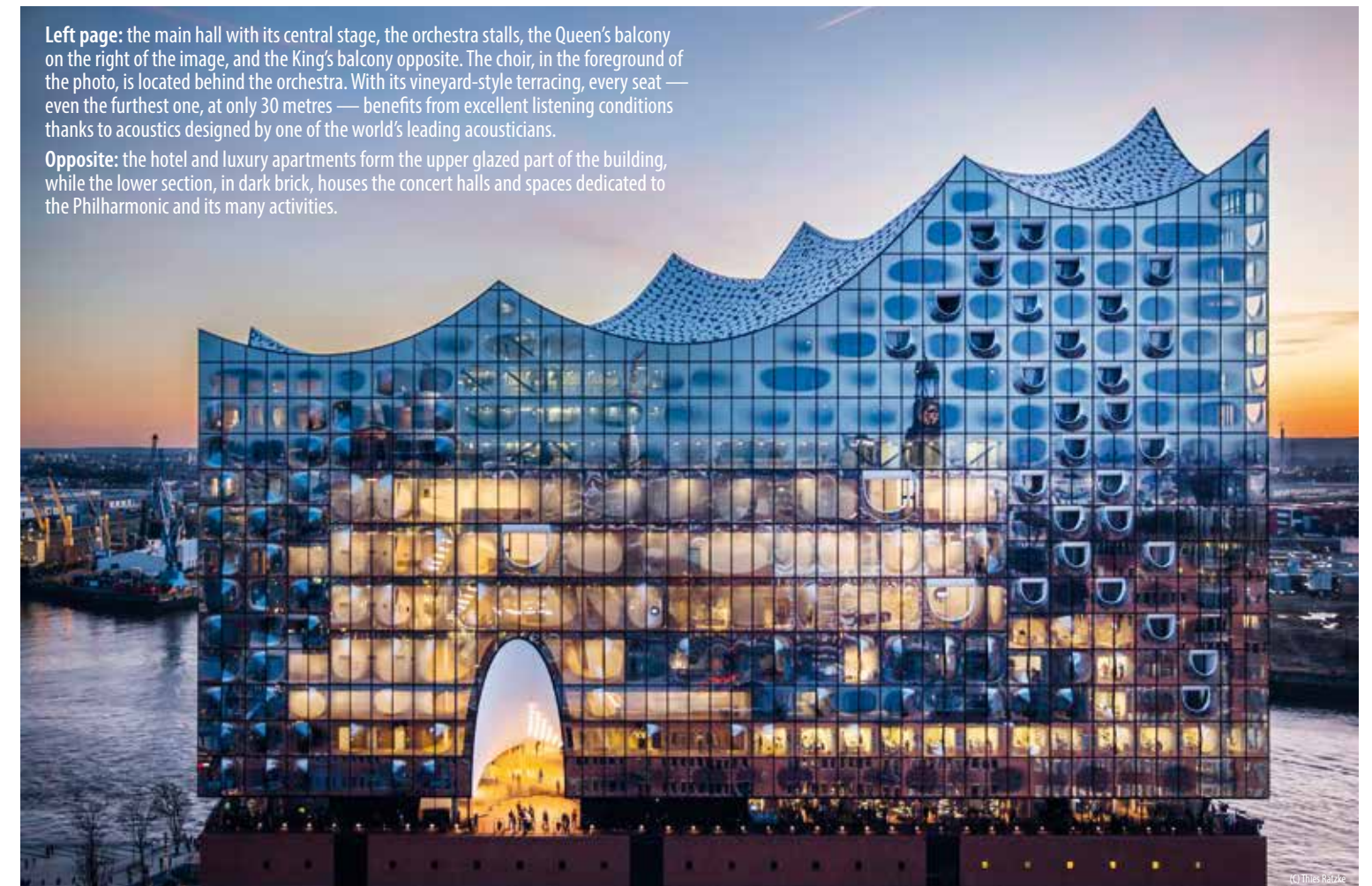
Hamburg Philharmonic: A MODERN-DAY CATHEDRAL

Dantesque and sublime, a modern-day cathedral and a masterful ode to music, the Elbphilharmonie is a tribute to the first to fourth arts. Architectural genius, acoustic performance, a pharaonic budget and a hint of scandal make the half-sister of the Philharmonie de Paris a success, confirming its ranking among the best in the world.

Jean-Marie Hubert

Left page: the main hall with its central stage, the orchestra stalls, the Queen's balcony on the right of the image, and the King's balcony opposite. The choir, in the foreground of the photo, is located behind the orchestra. With its vineyard-style terracing, every seat — even the furthest one, at only 30 metres — benefits from excellent listening conditions thanks to acoustics designed by one of the world's leading acousticians.

Opposite: the hotel and luxury apartments form the upper glazed part of the building, while the lower section, in dark brick, houses the concert halls and spaces dedicated to the Philharmonic and its many activities.



Dominating the port of Hamburg, the Elbphilharmonie stands majestically in the Hanseatic setting of the North Sea. Germany, which gave us the greatest masters of romantic and symphonic music, from Beethoven to Wagner and Schuman to Schubert, had to join the club of the Top Ten best architectural achievements in the service of music.

The study of the sacred pairing of architecture and acoustics takes us back to the 2nd millennium BC, to Epidauros in Greece. Regardless of the listener's position in the amphitheatre, they must be able to hear the slightest breath on stage, or the crack of a match, as our guides do today. This miracle of acoustics was often replicated by the Romans, for example in Verona, where the ancient amphitheatre still hosts the Verdi Festival every year, attracting 20,000 spectators (40,000 in the past). It is my favourite festival, which I never miss, or in Orange, France, where the Chorégies are part of the national musical heritage.

Although the Vienna Philharmonic Orchestra (founded in 1842) is the most renowned, it usually performs in the Golden Hall of the Musikverein, considered one of the most beautiful concert halls alongside the Concertgebouw in Amsterdam and Symphony Hall

in Boston, but which only has 1,744 seats.

However, with the 21st century, the architectural and, above all, acoustic revolution has changed the game. The world's most famous architects have understood that acoustics, an extremely technical subject, is a speciality they have to deal with. This has led to the emergence of the world's two largest acoustic design firms: Marshall Day Acoustics in Australia and New Zealand, and Yasuhisa Toyota in Japan and its American subsidiary, Nagata Acoustics International.

THEIR CREDO: TO CHANGE THE WAY MUSIC IS LISTENED TO

Whether in Paris or Hamburg, the listener is not seated in front of the orchestra but around it, and must never be more than thirty metres away from the musicians. What's more, acoustic treatment is incorporated into the design of the concert halls themselves, hence the strange reliefs of hollows, bumps and curved cut-outs. These projects would be impossible in our traditional, sacred venues without destroying world heritage sites, such as in Vienna or at the Palais Garnier in Paris.

Opposite: a partial view of the pipes of the monumental KLAIS organ, with 4,765 pipes, including 380 in wood and the rest in tin alloy. Weighing 25 tonnes, it features 69 stops (84 ranks), across four manuals (including two expressive ones) and a pedalboard. Also visible is part of the “white skin”, a perforated acoustic material widely used in the main hall. Different types of wood are also employed, depending on the desired effects in density, absorption or reflection.

Right page: the roof of the Philharmonie symbolising the stormy North Sea it appears to rise above. In the inaccessible parts, one of the 362 shock absorbers supporting the weight of the main hall.



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The Philharmonic halls in Paris (see Dansy No. 60) and Hamburg are thus half-sisters in several respects:
- the very distinctive contemporary style of their imposing and dominant architecture,

A new sociological approach for music lovers, forming a cultural — almost cult-like — community.

- in Paris, the use of 265,000 aluminium birds to cover the building; in Hamburg, a roof that echoes the dance of the North Sea in the form of waves during heavy swells, carrying metal discs,
- internationally renowned architectural firms: Jean Nouvel in Paris, Herzog & de Meuron in Hamburg,
- The world's best acoustic engineering firms: Yasuhisa Toyota in Hamburg and Yasuhisa Toyota and Marshall Day Acoustics in Paris.
- Large capacities that can accommodate the best symphony

orchestras and choirs: 2,400 seats in Paris and 2,100 in Hamburg.

Although this is now overshadowed by the success of the projects and their international reputation, it should be remembered that the budget in Paris rose from €200 million to €534 million, generating lawsuits and recriminations, while in Hamburg it rose from €77 million to €865 million. Budgets were therefore blithely exceeded, by 2.5 times in Paris and more than ten times in Hamburg, which preferred to bow down to success rather than wage endless war.

The winners? First and foremost, music, then culture and the millions of delighted spectators who came from all corners of the globe to experience music in a different way, overturning the codes of classical culture. In the past, this type of venue was built to meet a specific need. In Hamburg and Paris, it was done to create something new, a strong emotional sense of togetherness, a new sociological approach for music lovers, a new cultural community, almost cult-like, which makes us think of philharmonic halls as modern-day cathedrals. □



THE ELBPHILHARMONIE UNDER THE MICROSCOPE

The aptly named ‘Elbphilharmonie’ stands on three arms of the Elbe and imposes its majestic architecture on the city and the North Sea. Built on former warehouses, the building features a lower section housing the concert halls, a 37-metre-high plaza offering panoramic views of the city and the harbour, and a 5* hotel with 250 rooms, each with a fully glazed façade, giving the impression of being suspended in the air. Forty-five luxury apartments, restaurants, shops on the plaza and a car park make it a multifaceted and welcoming venue. The Elbphilharmonie has three concert halls, including a 2,100-seat ‘vineyard’ hall for symphony concerts and a 550-seat hall for chamber music concerts. In the large hall, acoustician Yasuhisa Toyota had 10,000 plaster panels individually milled to form a ‘white skin’ adjusted to the millimetre, allowing the alchemy between direct and reflected sound to be adjusted with great precision through a set of carefully calculated reflections and damping.



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But the most incredible thing is not visible to the audience. You have to go inside the structures to see it to believe it: the 2,100-seat main hall rests entirely on 362 enormous dampers that mechanically decouple it from the building: the hall is suspended on dampers, just like a car! When you know the role that mechanical vibrations play in reproduction, you understand the principle. Our turntables are also based on suspension technology to compensate for any harmful external mechanical interference. Having experienced it for three days, the unique experience of this press trip to the Elbphilharmonie was as memorable as it was complete. The thermal shock between the icy winds swirling around this diamond of light, the shock between the port, its cranes and its smoke, and the haptic atmosphere of this warm place made of solid wood and velvet seats, took us from a shiver to total immersion in the music, allowing us to experience the work with breathtaking realism.

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