Gerhard Richter, Two Grey Double Mirrors for a Pendulum, 2018

The installation

Gerhard Richter's work Two Grey Double Mirrors for a Pendulum was installed in the Dominican Church in 2018. Together with his window in Cologne Cathedral (2007), the Münster installation is his second piece created for a church—in this case, one that has been deconsecrated. The work consists of three elements that relate to the space in a particular way: pendulum, floor plate, double mirrors. At the work's centre is a Foucault pendulum designed by Richter and constructed in collaboration with the Physikalisches Institut of the University of Münster. It consists of a metal sphere (ø 22 cm, 48 kg) suspended on a 28.75 m long stainless steel cable from the crossing dome of the Baroque church. Beneath the pendulum's mounting is a Charron ring (ø 7 cm) designed to prevent the pendulum from swinging elliptically once set in motion. The sphere's uninterrupted swinging motion is generated by an electromagnetic motor installed below the circular floor plate made of greywacke—a sedimentary rock some 380 million years old. The sphere, to which a magnet is attached, receives a pulse from the motor that causes the pendulum to start swinging at a uniform amplitude. The floor plate has a concave form, allowing the pendulum to swing above it at a constant height of 4 cm. The pendulum's relationship to the earth's surface as it rotates cannot be directly perceived: for this reason, the outer rim of the greywacke plate is engraved with a 360° goniometer scale from which the earth's rotation can be ascertained. In the course of an hour one can observe a rotation of some 12 degrees. In Münster it takes about 30 hours to complete a full rotation of the floor plate; by contrast at the North or South Pole it would require just 24 hours. The goniometer's duodecimal scale reflects the division of time of a clock-face which serves as a tool to visualize time.

The physics experiment

For his installation, Gerhard Richter adopted the experimental set-up established by the French physicist Léon Foucault. In 1851, Foucault discovered that the ground underneath a freely swinging pendulum slowly rotates. Since gravity only exerts its force vertically, it was evident that it was not the pendulum but the ground that was moving. Accordingly, as a visitor one is confronted with the counterintuitive fact that due to the earth's rotation we are in fact constantly in motion, even if we believe that we are standing still on one spot. By contrast, the sphere keeps swinging uniformly on its trajectory. With the very simple construction of his experiment involving a pendulum in the Panthéon in Paris, Foucault gave the first-ever visible demonstration of the earth's rotation to a broad audience, which although imperceptible, affects everything. And even though proof of the earth's rotation had already long been established by the mid-nineteenth century, Foucault came up with a generally intelligible experiment which made this theory understandable in practice. The novelty of this was that he made the earth's rotation on its own axis palpably verifiable solely from observation of the planet itself. As the historian of science Michael Hagner has remarked, "On the one hand, the pendulum experiment is a landmark in the history of physics and astronomy [...]. On the other, it also belongs to the history of science's public self-presentation." It is the simplicity of the experiment, which has continued to fascinate for over one and a half centuries, even if one possesses none of the mathematical and scientific knowhow required to thoroughly penetrate it.

¹ Michael Hagner, Foucaults Pendel und wir. Anlässlich einer Installation von Gerhard Richter, Cologne 2021, 12.

Two grey double mirrors

The pendulum and the floor plate are flanked by four upright, oblong, grey panels of glass (each 6 × 1.34 m), whose material and colouration have featured repeatedly in Richter's work since the late 1960s. The glass panes have been grey enamelled on the rear, while their front sides have been vaporised with a mirror coating. The sheets are mounted in pairs on the walls of the church's transept. Both pairs of mirrors correspond in a special way with the well-proportioned ecclesiastical space conceived by the architect Lambert Friedrich von Corfey. Two of the glass panels have an identical tone of dark grey, the other two have different tones of light grey. As Gerhard Richter observed in 1975, "Grey. It makes no statement whatever; it evokes neither feelings nor associations [...]. It has the capacity that no other colour has, to make 'nothing' visible. To me, grey is the welcome and only possible equivalent for indifference, noncommitment, absence of opinion, absence of shape."²

Painting as a medium

It is visual perception, vision per se, that interests Richter. For more than fifty years he has been exploring the medium of painting, challenging its conditions and possibilities in his works. One of the questions that has continued to preoccupy the artist concerns the correspondence between painting and reality. In the process of fathoming this issue he has played out all the variations of subjective role of the artist in painting with recourse to the most advanced techniques available at any time. Considering painting as a surface, as a field of vision and a vista takes us to Richter's artistic exploration of mirrors and panes of glass. The art historian Benjamin Buchloh remarked about the work Acht Grau (Eight Grey, 2002)—in other words, the same grey mirrors that Richter returns to in the Dominican Church—"that it critiques an almost compulsively privileged ocularcentrism." This proposes a radical withdrawal of perception and connotation, thus driving the viewer towards self-reflection: What are we seeing when we see?

Everything that takes place between the double mirrors in the Dominican Church is unavoidably incorporated into the work, with the result that the glass panels veer between painting, photography, sculpture, architecture and tableau vivant. For a brief moment, reality—in the form of a reflection—inscribes itself into the two grey double mirrors. A dynamism that pervades the passive quiet of the monochrome mirror images becomes apparent. The observing subjects are thrown back on themselves and confronted with the possibilities, but also limitations, of their own perception—an individual aesthetic experience within time and space. Richter's glass panels and mirrors allude to the infinity of possible representations and the simultaneous finite realm of what can be represented—no truth can be declared absolute, no image of reality created that can be definitively grasped. The artist thereby refuses those qualities which characterise most traditional works of art: "While a painting as a storage medium conveys a single, static image, the mirror as a medium of transmission delivers images in the plural, i.e. an infinite number of ephemeral and therefore unsteady images."

² Gerhard Richter, ""From a letter to Edy de Wilde, 23.2.1975", in: Dietmar Elger und Hans Ulrich Obrist (eds.), *Gerhard Richter. Text. Writings, Interview and Letters* 1961–2007, Köln 2008, 92

³ Benjamin H. D. Buchloh, "Gerhard Richter's Eight Gray. Between Vorschein and Glanz", in: *Gerhard Richter. Eight Gray.* Exh.-cat. Deutsche Guggenheim, Ostfildern-Ruit 2002, 13–29, 28.

⁴ Hubertus Butin, "Gerhard Richter: The Variety of Achromatic Images", in: Sies + Höke (ed.), *Gerhard Richter, Achromatic*, 75–84, 77

Time and space

The interplay of the various elements in this installation transforms it into something more than a physics experiment. We rediscover ourselves caught up in a mélange of science and visual art, of laws of nature and subjective experience. The installation opens up to sensory experience something which would otherwise elude our limited perception, while at the same time challenging our compulsion to see and understand. The oscillation of the pendulum fuses calm and movement into a steady rhythm. As a primeval material of the earth, the greywacke stone underpins this long-term experiment. Facing it are the mirrors with their constantly changing images. As human subjects we are confronted with our ephemerality, with that brief moment when we are inscribed in time and space while earth just continues to turn. Paradoxically, a Foucault pendulum that has been installed in a church—whether consecrated or, as here in the Dominican Church, deconsecrated—is both the same, yet entirely different object from one, for instance, that is harboured in a science museum. The location of the pendulum gives rise to different associations, other mental or sensory evocations. But even in its deconsecrated state, the venue is not neutral: it remains a space of contemplation and transcendence.

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The Dominican Church

Historical site

After the Dominican convent was first founded in Münster in 1651, the community succeeded in purchasing several parcels of land between the trade routes Alter Steinweg and Salzstrasse. The new monastery was constructed in flamboyant Baroque style between 1708 and 1725. The building embodies Münster's ascent to a regional capital of Baroque character and the prince-bishopric residential city in the 17th and 18th centuries, when the fragmented medieval structure of the town of merchants and artisans fell apart and was replaced by new, opulent aristocratic courts, but also by new monastery complexes covering large swathes of land. Builder of the Baroque Dominican monastery complex—the third establishment of a mendicant order to be set up in Münster—was the eminent prince-bishopric architect Lambert Friedrich von Corfey (1668–1733). He conceived a church of outstanding artistic quality in the style of Francoltalian High Baroque. The cloistered convent abutted at the northern end. Its southern brick façade, together with the church's west-facing façade, forms a small square in front of the church's main entrance. In 1811, during the period of secularisation, the monastery was dissolved and the church emptied. Thereafter, as a state holding, the church served the Reich military treasury as a depot.

In 1881, the City of Münster purchased the church, using it from 1889 onwards as school church for the municipal secondary school. With its liturgical function restored, what the building now lacked were appropriate interior furnishings. A Baroque altar matching the church's architectural style was found in the Church of St. Ulrich (or "Gaukirche") in Paderborn and installed in Münster in 1904.

During World War II the former Dominican complex was severely damaged by bombing. All that survived of the erstwhile monastery was a ruin of the southern wall. In the church itself the dome collapsed onto the crossing with the adjoining arches, creating considerable wreckage. The roof was already sealed by 1946. It was not until 1961 to 1974 that the church was restored and refurbished, and then taken over by the university congregation. The new ceiling-high screen separating the church interior from the monks' choir gave increased emphasis to the liturgically desired character of a central space. Although still in municipal possession, the church was once again deconsecrated on 12 November 2017.

Heritage building

Lambert Friedrich von Corfey found inspiration for the particular design and formal character of the Dominican Church in the prevailing spirit of the Baroque during a long educational tour through France and Italy. A reflection of his impressions gathered on this journey is given in the detailed notes of his travelogue which he applied to the architecture and decoration of the church.

On the street side, the domed pillar basilica with its transept appears as an unadorned brick façade crowned by a high, central tambour cupola and two towers flanking the choir. The western, representative façade in sandstone is of brilliant quality. In its composition it meets the requirements of the three classical orders of columns arranged one above the other corresponding to their respective "weight": at the bottom are the Doric columns on either side of the portal. Above these, rising two stories, are lonic pilasters, while beneath the crowning triangular pediment are the Corinthian pilasters. Derived from Italian architectural tradition, this "triple superposition" is executed to perfection. Façade ornaments such as festoons (garlands of flowers, leaves or fruit) and flaming vases stem from the repertoire of decorative art at the time of Louis XIV in France. Two statues in the curved niches on the outer axes

depicting the patron saints of the order, Saint Dominic (right) and Thomas Aquinas (left), complete the iconographic programme.

As a church of a mendicant order, its well-proportioned interior possesses a remarkable simplicity and is almost entirely without ornament. It consists in a three-nave, groin vaulted basilica with a central cupola topped with a lantern tower; below, the tower is accompanied by slender, transept-like adjacent rooms. The overall spatial composition is impressive in terms of its proportions, its dynamic forms and the harmonious balance between its longitudinal arrangement and character as a central space. The idea of a central space was reinforced by the construction of a screen—originally as high as the entablature—separating the main nave from the single-bay polygonal choir for the monks. In the period of the building's use as a school church this dividing screen was removed; on becoming a congregational church for the university it was restored to its original height. Today, the separation of the choir from the main nave creates an interesting dialogue between the "central space" which harbours the artwork by Gerhard Richter and the elongated choir with the Baroque altar.

The exceptional position of the Dominican Church results from its negotiation of competing principles and formal vocabulary from various realms of European culture. Since 1988, the church with its altar and the remnants of the monastery wall has been protected as a historic monument.

The Baroque altar

The deconsecrated Baroque high altar behind the choir screen is the only surviving sacred work of art in the church. Originally dating from 1699, the retable in Münster was newly installed and consecrated in 1904. Today, the colourful carvings by the Paderborn artist Heinrich Gröne (1622–1709) are considered the last remaining example of a Westphalian Baroque altar of this quality and size in the Münsterland region.

In the manner of high Baroque altar architecture, it consists of a threetiered arrangement of columns that on its uppermost level support a heavy entablature with variously tiered, broken pediments. Mounted above this, as an attic, is a lower, narrower second storey with a single series of columns. The retable's complex construction is elaborate and lavish. Particularly striking are the pillars with Corinthian capitals, whose fluted spiral shafts are adorned with vines bearing leaves, flowers, grapes and fruit. Frolicking between these coiling ornaments are a number of cherubs. This ornamental variety is echoed in the complex colour range of the altar.

The ornately structured architectural backdrop of the altar is brought to life by an iconic programme consisting in two paintings and four accompanying sculptures in wood. The paintings depict the Holy Trinity and the Assumption of Mary into heaven. Although the main altarpiece showing the Assumption can be identified as a right-reading copy of the copper engraving by Schelte à Bolswert based on a preliminary study by Peter Paul Rubens in Buckingham Palace in London, the artist of both paintings is unknown. The larger-than-life sculptures show in the lower section of the shrine two canonised bishops with connections to Paderborn: Saint Ulrich (left) and Saint Liborius (right). Placed above them are the Apostles Peter and Paul. The four coloured sculptures were probably created by the sculptor Georg Philipp Brüll, the brother of the altar's donor, the eminent clerical dignitary Bernhard Jodokus Brüll.

Today

As an ensemble, the Dominican Church shows an interaction of diverse aspects that initially would appear incompatible. On the one hand, we have the volatile history of the building with its changing functions and patterns of ownership—a multi-faceted spectrum interweaving the past, the present and the future. Then there is the architecture itself that shapes a dramatic correspondence between the longitudinal axis of an ecclesiastical building and the secular idea of a central space—a balancing act both physically tangible and a leap of the imagination, whose impact is calming, moving and stimulating in one.

It was this exceptional spatial experience that Gerhard Richter chose for his artwork. For this reason, all restoration measures executed between 2019 and 2021 have been extremely circumspect and, as far as possible, avoiding any visible intrusion on the historical character of the former ecclesiastical venue. The Baroque altar has remained concealed behind the screen with its lattice gate, while the 1960s colour palette with the yellow-toned floor and graded pink hues emphasising the architectural arrangement was restored. Essential additions such as acoustic panels, improvements to the air-conditioning, barrier-free accessibility and a vestibule, executed in unobtrusive design, enhance the functionality of the space. The necessary infrastructure is housed in the extended former sacristy.

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