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(New National Gallery) in Berlin**

Watson, V.A.

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Restoration, Expansion and the Building Art:

Contemporary Issues in the Life of Mies van der Rohe's Museum of Modern Art (New National Gallery) in Berlin

by

VICTORIA WATSON

Foot of page: Victoria Watson is a founder member of DWA&Co, who design and publish work about architecture, and a Senior Lecturer at the University of Westminster. She has contributed articles about the history and theory of architecture to journals and magazines and published a number of books. Her architectonic models, which are derived from the study of avant-garde painting and building, have been exhibited in London and other locations.

This essay is a consideration of the very sensitive issues around the restoration and extension to the modern masterpiece by Mies van der Rohe, the Neue Nationalgalerie (NNG: New National Gallery) on the Kulturforum in Berlin. The NNG is important for the City of Berlin, not least because it is the only building realised by Mies in Europe after his emigration to the USA. But the importance of the NNG goes further than that. It is an icon in the history of twentieth century art and architecture, embodying the ideals of cosmopolitan modernism. As a building of unexampled clarity and virtuosity, any architectural intervention will inevitably invite discussion of means and ends, and the appropriateness of change to the fabric and setting of the original historic monument.

The New National Gallery (NNG) was designed by Mies van der Rohe, during the Cold War, for a site on the then newly designated 'culture forum' in west Berlin. The culture forum is located at the south-eastern tip of the Tiergarten, just west of Potsdamer Platz; it lies very close to the course of the old Berlin Wall. At the time of Mies' appointment, in July 1962, the area had only just been designated as a culture forum and to look at seemed little more than a parking lot. The bleak appearance can be traced back to before the Second World War and to the Nazi's plans to remodel Berlin as the capital city of a vast empire - the project is sometimes known as Germania. In 1962, just north-east of Mies' prospective site, work had begun on Hans Scharoun's 'Philharmonie,' home of the Berlin Philharmonic Orchestra. In opposition to the German Democratic Republic on the eastern side of the Wall, the culture forum was intended to represent the values of the German Federal Republic on the western side.

Recently, two important decisions were made about the NNG. First, to substantially repair and restore the building and second to expand and update its museological function. The restoration and expansion are separate procedures, however, they cannot be viewed as separate projects. They are both part of a single operation that aims to up-date the NNG in line with new cultural values,

which have been emerging since the dissolution of the Soviet Union, the reunification of Germany and the demolition of the Wall.

The decision to repair the NNG led to the appointment of David Chipperfield Architects to oversee the work and has meant the building has been closed to the public for the past five years - it is due to reopen in August 2021 (Figs 1 and 2). Chipperfield was a good choice because he was already familiar with Berlin's museum culture through his rebuilding of the Neues Museum. The completion of the Neues Museum in 2010 was widely covered in the media and confirmed Chipperfield's reputation as an innovator in the field of reconstruction. His approach was novel and unique because he did not attempt to reproduce the past historic form of the Neues Museum, rather he worked with what remained of the building materials to produce a new form. In the case of the Neues Museum, what remained of the old building was only partial and in ruins and it was necessary to introduce new features to complete the museum. With the NNG the situation is different and, as we shall see, Chipperfield's method of 'dehistoricised reconstruction'¹ produces a different result.

The selection of an architect for the museum expansion has involved a much more complicated process: sufficient for the purposes of this essay to note, it began with an open competition and ended with the selection of a design by Herzog and de Meuron Architects - famous for the Tate Modern art space on London's Bankside. If we look through the competition brief we can see how the influence of Tate Modern has informed the specification of the architectural task, for example:

Rather than architectural thresholds, plinths, or imposing flights of steps, the preference is for a free, inviting gesture that characterises both the exterior and the interior. The aspiration of the museum, coming from the art, of being an open and tolerant place, but also a place of provocation and nonconformity, should be reflected in the design of the building and its spaces.²

Herzog and de Meuron propose a single, detached building in the form of an enormous brick barn, with a cruciform circulation pattern inside.³ It will be built on the vacant plot to the north-east of Mies' building and reach out toward Scharoun's Philharmonie - on-site preparations for the building work began in November 2020.

HISTORICAL BACKGROUND

In considering Mies' design, it is important not to forget the historical background of Berlin's Museum of Modern Art, which stretches back into the 1930s and to the interrelationships of architecture and politics in Nazi Germany. On the fourth anniversary of his rise to power, Adolf Hitler appointed Albert Speer as Inspector General of Buildings, tasking the architect with the planning and organisation of the comprehensive redevelopment of Berlin.⁴ One important feature of Speer and Hitler's plans was a monumental north-south axis, a huge boulevard, lined with buildings and punctuated by monuments, it was to have been in the order of seven kilometres long. The axis would have connected two major railway stations, one at either end, and been dominated by the enormous dome of the Great Hall to the north and the over-sized Arch of Triumph to the south. Between these

two buildings, the axis would have cut through the Tiergarten and across the area of today's culture forum. At that point, there was to have been a massive circular junction called the Runder Platz, which would have been surrounded by large buildings and circumscribed by enormous arcades.⁵ When work first began on the north-south axis the Runder Platz area was a popular middle-class residential quarter with magnificent villas set out along wide leafy paths and roadways. At the time of his emigration to the USA, in 1938, Mies had been living there; he only just missed the demolition work, which began in 1939 - no doubt an unpleasant and sometimes cruel experience for those people who remained. The Second World War, starting soon after, completed the work of destruction. At the time war broke out, construction had barely started but work had begun on one of the buildings for the Runder Platz area, the Haus des Fremdenverkehrs (House of Tourism), it was never completed, but the shell survived the war. The half-built remains of the House of Tourism were finally taken down in 1962 and the NNG was built close by (Fig.3).

Although grand, monumental architecture is often associated with fascism, in fact the idea for the north-south axis did not originate with Hitler and Speer but dates back to the beginning of the century, when it formed a key part of the first spatial planning concept for Berlin and neighbouring towns. The plan was worked on between 1908 and 1919, by an architect named Martin Mächler. His vision for Berlin was political and ambitious, reflecting the important representative and administrative functions of the capital, with its connections to the rest of the Empire - Germany had an empire in those days - and to the world. The precarious situation of Germany after the First World War meant Mächler's plan was never realised, however, the idea of the north-south axis lived on. The reason for its longevity had less to do with lingering imperialist ambitions than with the pragmatics of city planning: a north-south connection would have been an extremely useful addition to Berlin's road-network.⁶ Although Mächler's north-south axis was architecturally ambitious, it pales in comparison to the megalomaniac forms dreamt-up by Hitler and Speer in the 1930s.

At the same time as work began on the Runder Platz, a young American art critic named Clement Greenberg was working on his first important essay, 'Avant-Garde and Kitsch', in essence an argument in favour of International Socialism. It was published in the New York-based, Trotskyist journal, *Partisan Review*.⁷ In his essay, Greenberg presented the opposition 'kitsch' and 'avant-garde' as a cultural formation arising out of the historic conjunction of proletarianisation and mass literacy amongst industrial populations. He argued: kitsch is a commodity, devised to satisfy the demands of the new urban masses who are 'insensible to the values of genuine culture,' but 'are hungry nevertheless for the diversion that only culture of some sort can provide.'⁸ To evidence his argument, Greenberg cited the case of Nazi Germany, as a political power using kitsch 'to promote on a much more grandiose style than in the democracies the illusion that the masses actually rule.'⁹ Greenberg did not mention the Berlin north-south axis, but I assume he had it in mind. Another example he must have been aware of was the first representative building of the National Socialists, known as the Haus der Deutschen Kunst, which had opened in Munich in 1937. It was a steel-framed structure, clad in stone, with a sparse, neo-classical appearance.¹⁰ One feature of the opening celebrations for the Haus der Deutschen Kunst was the exhibition, in a nearby pavilion, of

what the Nazis termed 'degenerate art.' The exhibition included several hundred avant-garde artworks, many of them by well-known Bauhaus artists and friends of Mies, such as Paul Klee and Wassily Kandinsky. Unlike our habitual presuppositions about art exhibitions where, even if we struggle to appreciate them, we expect the art works to be treated with respect, the exhibition of degenerate art set out to denigrate the artworks, prompting viewing audiences to do the same. It was shown in several major cities in Germany and is reported to have been enormously popular, attracting more than two million visitors in Munich alone.¹¹

The stark contrast between Greenberg and Hitler's appreciation of avant-garde art is a crude but effective demonstration of just how vulnerable works of art can be to the context in which they are shown. Thus, the very same objects which for Greenberg were signs of 'genuine culture' were, for Hitler, symptoms of cultural degradation. However, it is important to note, the American critic and the German führer did have something in common, because they shared the suspicion there was something not quite right about modern industrial culture and believed the problem was reflected in modern art. After the war, Hitler's denigration of avant-garde art could be made to work in its favour, and, following the federalisation of western Germany (based on the fusion of those zones occupied by the western powers) exhibitions of avant-garde art began to appear as part of a programme of cultural rehabilitation. One important feature of the rehabilitation programme was the incorporation of avant-garde art into a historical narrative that legitimised the artworks and altered their public perception. No longer presented as radical and avant-garde, the artworks were now presented to the public as the 'high art' of the twentieth century. The decision to build a Museum of Modern Art on the culture forum in Berlin was due to the success of the rehabilitation programme and the art historian Werner Haftmann, who played a key role in formulating and promoting the high art narrative, was appointed as its first director.¹² Another factor, perhaps of greater importance, was the Cold War division of Berlin.

The division of Berlin into an eastern and a western sector left most of the City's cultural buildings in the eastern sector, which meant the western sector, if it wanted representative buildings, would have to build new ones of its own. In response, the decision was made to install a cluster of cultural buildings - the culture forum - close to the Berlin wall, to stand as an urban statement, both formal and institutional, of Federal Germany's allegiance to the West. Mies was an obvious choice to be the architect of one of these buildings, not only because of his pre-war links with the Bauhaus, but also because of the notable success of his emigration to America, where he had become famous as a leading protagonist of what was called the International Style in Architecture.

FORM AND FUNCTION

During the twenty or so years he had been in America, Mies had evolved a cool, reductive formal language, based on the expression of the building frame and enclosing 'skin,' as a carefully proportioned assembly of metal and glass elements, which hang from the frame as a curtain-wall and enclose a volume of space that can induce a feeling of weightlessness in people who are

immersed inside.¹³ Mies' experiments with this reductive mode of expression fall into two categories: multi-storey towers and single-storey pavilions. The NNG belongs to the second category, it is a type of clear-span hall and its ancestry can be traced back to the design of the Crown Hall at the Illinois Institute of Technology; the development is well-told in a number of monographs about Mies and will not be repeated here.¹⁴ However, unlike the Crown Hall, which has a flat, white suspended ceiling, at the NNG the clear-span is expressed by means of an enormous, flat, canopy roof, in the form of a grid, from which a curtain-wall, made up of large sheets of single plate glass, set within a slim metal framework, is suspended on all four sides, enclosing a clear, uninterrupted expanse of space inside (Fig.4). What is remarkable about the NNG is the way the conceptual structure, i.e., the grid that organises the design, appears to align perfectly with the physical structure of the roof and enclosing curtain-wall.¹⁵

For all its formal perfection - or perhaps because of it - the NNG is, to say the least, challenging as a place to display art. This is especially so for traditional art-forms, such as painting and sculpture, because there are no walls or rooms to place them on, or in. The problem first became evident at the inaugural exhibition, when the NNG opened in 1968. Werner Haftmann opted to show a collection of paintings by Piet Mondrian, but, since there was nowhere to hang them, it was necessary to design and install an additional spatial device. The hanging system, designed by Mies, consisting of large white panels, suspended on invisible cables from the underside of the roof-grid was, in itself, cool and elegant but, as one critic put it, 'the paintings they bore seemed drowned in the ocean of surrounding space.'¹⁶ Mies was well aware of the problem posed by the clear-span space, however, he thought the difficulty was far outweighed by the creative potential it offered, because not only did it necessitate the invention of new modes of display but, more importantly, it encouraged the invention of new forms of art.¹⁷

Although Mies himself did not live to see any of the novel exhibitions that have since been staged there, his ambitions for the clear-span space have actually been realised. In his monograph of 2014, Detlef Mertins gives a snapshot view of some of the exhibitions that have taken place there. It reveals a great diversity of approaches, from hanging large format paintings, building small structures on the floor, raising a new floor, animating lines of text along the flanges of the ceiling grid, inserting a stage, hanging a 'blimp,' staging costumed performance, displaying large format video, installing exhibitions of architectural models and design, holding music festivals and circus performances.¹⁸ Mertins himself clearly admired the NNG's clear-span space and the diversity of its use, but he ends his account with a word of caution, pointing out that although the clear-span space is 'open to change and new ways of doing things,' yet it is not neutral and, in fact poses far more challenges for artists, curators and visitors than the conventional 'white box that has become paradigmatic of galleries for modern and contemporary art.'¹⁹

We will return to the 'challenge' of the clear-span space in a moment, for now we need to complete our description of Berlin's museum of modern art because, although the NNG is best known for its clear-span space, there is much more to the building than initially meets the eye. In order to reach the clear-span space, the visitor must first climb a shallow flight of stairs leading up

onto a vast podium. The clear-span space sits at the centre of the podium and to enter it the visitor must walk across and pass through one of the two sets of revolving doors set into the north-eastern face of the steel and glass curtain-wall. At the point of entry, the first-time visitor will not yet be aware that the podium houses an enormous basement, but they will soon find out. As they wander about the clear-span space, the visitor will encounter one, or both, of a pair of symmetrically disposed openings, cut into the floor, with stairways that lead down into the basement. If the visitor is feeling unsettled by the unusual nature of the clear-span space, in the basement they are greeted by a calming suite of white-walled gallery rooms - this is where the museum's permanent collection is displayed. The white-walled galleries are arranged as a route and the visitor can journey through them, contemplating the paintings and sculptures as they please. On the north-western side of the white-walled gallery suite there is an open, outdoor room that brings light down into the basement and serves as a sculpture garden. The basement also houses rest-rooms, a bookshop, a cafeteria and offices for the gallery staff, but these are discreetly tucked-away and do not interfere with the visitors promenade through the displays of art (Fig.5).

In 2014, just before the NNG closed for restoration, the State Museums of Berlin held a colloquium there called Form versus Function, the purpose of which was to debate the significance of the building work that was about to begin. In the presentation he gave at the colloquium, David Chipperfield commented on the basement space, remarking on how comfortable it is:

...Issues of orientation are very straight forward, there is a clear circulation, there is a clear orientation, daylight is provided by the big window to the garden. All sorts of things, I mean every museum that we work on, the interplay between clear planning, clear orientation, the presence of daylight, in a way that doesn't make difficulties for exhibition. These things are all there and seem to work very well...²⁰

Chipperfield proceeded to explain how, thanks to the intelligence of Mies' design, very little reconstruction work was necessary for the basement area of the building, it was largely a matter of repair. However, for the clear-span space upstairs things were more challenging.

The source of the challenge for Chipperfield lay, not with the lack of walls and rooms, but with the materiality of the curtain-wall, plausibly the most critical design feature of all Mies' steel and glass buildings: the junction where the two materials meet. As noted above, the curtain-wall consists of a delicate metalwork frame, with single-glazed units set within. It is beautifully proportioned and finely detailed, but such refinement is not suited to Berlin's hot summers and cold winters. The desired level of humidity that must be maintained for the sake of the artworks inside the exhibition space, has led to constant condensation on the inside face of the glass and to the expansion and contraction of the metalwork frame, which causes the glass to crack. In order to eliminate the problem completely, it would be necessary to replace the delicately proportioned curtain-wall with a more robust one, designed to incorporate double-glazed units. But to do that would completely alter the appearance of the building, and, as Chipperfield explained, 'you wouldn't have recognised it; and we would have been the slaughterers of this building.'²¹

Instead of opting for radical alteration, the various parties to the NNG restoration were able to agree on an alternative strategy, deciding to adapt the original curtain-wall so as to incorporate expansion joints, which would help stop the glass from cracking. As a consequence of this strategy, the original metalwork parts of the curtain wall were repaired but the glazing panels were replaced with new ones. The new glass panels are the same width and height as the originals, but slightly, only ever so slightly, thicker. This solution means the clear-span space will continue to live with problems of condensation and, as a consequence, sensitive works of art cannot be displayed in the upper hall in deep winter or high summer; but the thicker glazing means (i) the glass-screen will crack less often than it has done up until now and (ii) the changes to the building will not affect its appearance. And indeed, after two years of preparatory planning, followed by a five year process of building-work, in December 2020, a set of photographic images appeared in the media that show two things: first, the NNG looks the same as it did when it first opened in 1968 and, second, the NNG looks considerably less shabby than it did when it closed in 2015.²²

If, considered from the stand point of restoration, the case of the NNG is an example of exemplary practice - by which I mean, the body of the building is returned for public use as good as new - then what about its expansion: how, if at all, will the proposed expansion alter the relationship between the use and the body of the building?

MEDIUM AND MESSAGE

Currently, the body of the building is too small and does not provide enough space to display much of the National Gallery's impressive collection of twentieth century art - hence the plan to expand it. Of course, there are numerous challenges involved in any project of expansion, but with the NNG there is one especially challenging challenge which arises as a consequence of the building's appearance. As a first consideration, we might be forgiven for thinking the 'look' of the NNG is independent of the way it displays the permanent collection, because the permanent collection is displayed in the suite of white-walled gallery rooms, hidden and out of sight in the basement. If that were so, then the solution to the problem of expansion would be simple: extend the basement. However, the NNG basement is not underground, it is hollowed-out of the podium and the podium is a visible figure. It rises up from the ground datum of the city space around it - rather in the way a floating raft rises up from the expanse of the sea - and plays an important role in the overall 'look' of the building. The podium is a discrete figure with clearly defined limits that are carefully considered in relation to the steel and glass structure of the clear-span space sitting on top of it. When visitors climb the shallow flight of steps and ascend up and onto the podium, their kinaesthetic experiences are heightened in novel and stimulating ways, as if they themselves have become a kind of artwork.

The State Museums of Berlin have decided to solve the problem of how to extend the museum of modern art, without interfering with the appearance of the NNG, by building a brand new, independent building next door and then linking the two buildings by an underground tunnel, as they explain:

The new building and the already existing Neue Nationalgalerie, which was designed by Ludwig Mies van der Rohe and opened in 1968, will, as a result, constitute a firmly circumscribed unity. An underground connection shall make it possible to complete a round tour starting from art of the early 1900s through to the developments at the end of the 20th century – or in reverse. Both houses - the Mies van der Rohe building and the new one – can meanwhile be experienced as separate entities, each with its own entrances, own functional areas and identity of its own.²³

This solution was specified in the competition brief, published in 2016, which eventually led to the selection of Herzog and de Meuron as the architects of the new building. As we have seen, these architects propose a large, barn-like structure with a cruciform circulation pattern that establishes two perpendicular axes inside, the longer running in a north-east/south-western direction and the shorter in a south-east/north-western direction. The various departments of the expanded museum will be distributed to either side of the circulation route and the gallery spaces they accommodate will be configured so as to provide a variety of sizes and types. Since their success at Tate Modern, Herzog and de Meuron have built numerous museums and galleries for art: no doubt their considerable experience and expertise in this area will inform their approach to the design of the new galleries for the museum in Berlin; and this is something to look forward to in the future.²⁴ However, it is not the purpose of this essay to consider that aspect of the proposed new building, our purpose is to focus on the proposed link between the new building and the old. The decision to link the new and the old, via a tunnel, was made prior to the selection of a design for the new building and it is the tunnel, not the 'look' of the new building, which will be decisive for the fate of the NNG. The tunnel will have to be at the south-western end of the new building. In Herzog and de Meuron's scheme this is where the north-east/south-western circulation axis ducks under the twenty-three metres, or so, stretch of open space that will separate the new building from the old. The ground-floor level of the axis is below the ground-floor level of the NNG basement (Fig.6). From here, a stairway and lift will ascend, connecting the linkage tunnel to the suite of white-walled gallery rooms in the NNG basement. As the competition brief explains:

The planned connection's location between the new building and the Neue Nationalgalerie suggests that on the first floor of the basement, at the same level as the connection, the display could consist primarily of art dating from before 1945 and early post-war art from after 1945. Thematically, this would be a logical continuation of the exhibition of pre-1945 art in the basement of the Neue Nationalgalerie.²⁵

Although the tunnel will not affect the look of either the new or the old building, it will introduce a new set of possibilities for how visitors can enter and circulate through the NNG. As already mentioned, currently the NNG has just one point of entry and exit, which is through either one of the pair of revolving doors, set into the curtain-wall on the north-eastern side. The doors are aligned parallel to the flight of steps that lead up from the main public roadway (Potsdamer Strasse) and the north-eastern side is, very obviously, the main façade of the building. For the visitor, the way into the NNG is the same as the way out and entering and leaving the building are clear moments in their museum experience. Once the expansion is complete and the linkage tunnel is in place, this will no longer be

the case and visitors will have to make a choice about how they wish to enter and leave the museum complex. Just like the Tate Modern in London, visiting the museum of modern art in Berlin will become more like going for a walk in the city than going into a building. Of course, it might not be a bad thing to change people's possibilities for using the museum in this way, but we should also acknowledge that the change will alter perceptions of the Miesian building too.

To understand what is at stake in the alterations, we have to remember, Mies approached his architectural work from an avant-garde perspective and his attitudes are reflected in the buildings he designed, including the NNG. Just like other artists and architects of his generation, Mies' avant-gardism was a reaction to, and an attempt to escape from, the transitory nature of architectural form that can be observed from the historical study of architecture and leads to architecture's classification under notions of style. Mies' escape strategy led him to a kind of design fundamentalism, which he sometimes referred to by the term 'building art.' Mies understood building art as the medium that had supported architecture throughout its history.²⁶ Because of his aim, to reveal the medium of architecture, Mies' designs tend to be reductive and minimal, reduced to the bare essentials of the building art, as he saw it, which distinguish architecture from other methods and modes of building.²⁷ A brief comparison of the NNG with any other of Mies' post-American buildings, the Farnsworth House for example, will illuminate the theme of media-fundamentalism in his practice. In conducting the comparison, there are three things to notice, first, both buildings are single-celled enclosures, each one sitting on a platform and approached by a flight of stairs; second, both buildings are expressed as a synthesis of the four, rudimentary craft systems that have been traditionally understood as the basic ingredients of architecture: a frame, a plinth, a screen, a core;²⁸ third, both buildings demonstrate a single, reversible, spatial sequence from outside to inside. Even though Mies dissolved the boundary between the inside and the outside of his buildings by the use of glass, thereby producing a rich play of transparency and reflection, his designs never leave any doubt about the entry sequence and the actual point of entry is always clear and obvious.²⁹

Because Mies' buildings thematise the sense of architecture as a spatial medium, they can seem to transcend historical time, appearing as if they belong to no time and to all times simultaneously; what is more, in order to reveal space as such, Mies had to sacrifice programmatic specificity, so his buildings do indeed feel spacious, but also empty. The unusual combination of effects we sometimes encounter in a Miesian building can result in a feeling of exhilaration and sedation at one and the same moment; it is this combined feeling that gives the architecture its unique character. As we have seen, the proposed expansion of the NNG will complicate the entry sequence, thereby eradicating one of the spatial devices that affects the visitor. The change will undoubtedly alter the architecture; whether it is for better or for worse will depend on the receptivity of the people who visit and use the new museum complex. One thing that is certain however, thanks to the passage of time, eventually there will be no one left who can remember what it was like to visit the Museum of Modern Art when it had just one way in and out

Note: All images are by the author

NOTES

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- ¹ This is the term used by Fulvio Irace to characterise Chipperfield's approach, see 'Simple, Ordinary, Complex,' in *David Chipperfield Architects*, (London, 2018), 8-14, 12.
- ² Stiftung Preußischer Kulturbesitz, *Design Competition Brief, The Museum of the Twentieth Century, Berlin* (24 June 2016), 94.
- ³ Herzog and de Meuron's winning entry is available online at the museum's website, check the 'first prize' box and hit 'search' at: <https://www.nationalgalerie20.de/en/competition/design-competition/all-submitted>
[designs/?tx_cbnewsenhancement_list%5Bcontroller%5D=NewsEnhancement&cHash=53c2d019231ad9778e016170e2b881ae#results-list](https://www.nationalgalerie20.de/en/competition/design-competition/all-submitted/designs/?tx_cbnewsenhancement_list%5Bcontroller%5D=NewsEnhancement&cHash=53c2d019231ad9778e016170e2b881ae#results-list)
- ⁴ K.Connolly, 'Story of cities #22: how Hitler's plans for Germania would have torn Berlin apart', *The Guardian*, (14 April 2016), <https://www.theguardian.com/cities/2016/apr/14/story-of-cities-hitler-germania-berlin-nazis>, accessed 07 February 2021, 15:56.
- ⁵ C.Hardebusch, 'Culture Forum,' *Mies van der Rohe's New National Gallery in Berlin*, G. Wachter (ed), P.Craven (trans.), (Berlin, 1995), 32-55.
- ⁶ V.M.Lampugnani, 'Berlin Modernism and the Architecture of the Metropolis,' *Mies in Berlin*, T.Riley and B. Bergdoll (eds), (New York, 2001), 34-65.
- ⁷ C.Greenberg, 'Avant-Garde and Kitsch,' *Partisan Review*, VI, 5, (New York, Fall 1939), 34-49.
- ⁸ C.Greenberg, 'Avant-Garde and Kitsch,' C.Harrison and P. Wood (eds), *Art in Theory, 1900-1990, An Anthology of Changing Ideas*, (Oxford UK & Cambridge USA, 1992), 529-541, 534.
- ⁹ Greenberg, in Harrison and Wood (1992), 540.
- ¹⁰ The building is currently being restored, with David Chipperfield as the architect. His firm was appointed as the result of an international competitive bidding procedure in 2013.
- ¹¹ <https://hausderkunst.de/en/history/chronical#chapter1>, accessed 30 March 2021, 16:00.
- ¹² Haftmann's *Painting in the Twentieth Century* was first translated into English and published in 1960, the German version was first published in 1954/55.
- ¹³ For an account of Mies' architecture read in terms of 'weightlessness,' see R.Evans, 'Mies van der Rohe's Paradoxical Symmetries,' *Translations from Drawing to Building and Other Essays*, (London, 1997), 233-76.
- ¹⁴ P.Lambert, 'Clear Span', *Mies in America*, Canadian Centre for Architecture, Montreal and Whitney Museum of American Art, New York, (New York, 2001), 423-507.
- ¹⁵ For an analysis of the building in these terms see: V.Watson, *Haunting: Whitehead and Mies*, (Air Grid Publications, London 2018); V.Watson, 'Pictorial Grids: reading the buildings of Mies van der Rohe through the paintings of Agnes Martin,' *The Journal of Architecture*, 14/ 3, (2009), 421-38.
- ¹⁶ F.Schulze, *Mies van der Rohe, A Critical Biography*, (Chicago and London, 1985), 309.
- ¹⁷ Ibid.
- ¹⁸ Detlef Mertins, *Mies*, (London, 2014), 460-67.
- ¹⁹ Ibid, 466.
- ²⁰ David Chipperfield, Form vs Function, Mies und das Museum, <https://youtu.be/uV68PdDkpvo>
- ²¹ Ibid, 10:46 minutes into the talk.
- ²² <https://www.dezeen.com/2021/04/29/neue-nationalgalerie-overhaul-david-chipperfield-mies-van-der-rohe/>
- ²³ Stiftung Preußischer Kulturbesitz, (2016), 91.
- ²⁴ For more about Herzog and de Meuron's approach to gallery design see: V.Watson, 'Rurality and Minimal Architecture: An Inquiry into the Genealogy of Tate Modern's Bankside Gallery Spaces,' *ARENA Journal of Architectural Research*, 3(1), (2018),4. DOI: <http://doi.org/10.5334/ajar.46>
- ²⁵ Stiftung Preußischer Kulturbesitz, (2016), 96 (please note, the basement of the new building will be entirely below ground and its floor level will not align with that of the NNG).
- ²⁶ The theory of the avant-garde I rely on here is based on the argument in B.Groys, 'Jean-Francois Lyotard: The Roller Coaster of the Sublime,' *Under Suspicion, A Phenomenology of Media*, (New York, 2012), 148-60.

²⁷ Reyner Banham makes this point about Mies' architecture in his essay 'A Black Box: The Secret Profession of Architecture,' *New Statesman and Society*, (12 October 1990), 22-25, reprinted M.Banham, P.Barker, S.Lyall, C.Price (eds), *A Critic Writes – Essays by Reyner Banham* (Berkeley, Los Angeles and London, 1996),292-99.

²⁸ They are best known today from Gottfried Semper's *Practical Aesthetics*, which enjoyed something of a revival in the late 1990s (Gottfried Semper, *Style in the Technical and Tectonic Arts; or Practical Aesthetics*, H.F.Mallgrave and M.Robinson (trans), (Getty Research Institute, Los Angeles, 2004). Mies would have known them from his days working as an apprentice in Peter Behrens' office and from his exposure to the work of Karl Friedrich Schinkel.

²⁹ The NNG clear-span does actually have a pair of doors set into the rear façade too, however, these are not revolving doors, they are kept closed and you barely notice them. Presumably they are 'escape' doors, only opened in emergencies.